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1987
Joint Association
SURVEY ON DRILLING COSTS

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- American Petroleum Institute
- Independent Petroleum Association of America
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1987

Joint Association SURVEY ON DRILLING COSTS

Finance, Accounting
and Statistics Department

American
Petroleum
Institute

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PREFACE

The purpose of the Joint Association Survey is to provide annual information pertaining to the cost of drilling oil and gas wells and dry holes in the United States.

As in prior years, data for the 1987 JAS were collected from the petroleum industry through the joint efforts of the American Petroleum Institute, the Independent Petroleum Association of America, and the Mid-Continent Oil and Gas Association.

Washington, D.C.
October 1988

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1987
Joint Association
SURVEY ON DRILLING COSTS

SUMMARY OF FINDINGS. Findings pertaining to 1987 drilling costs and activity in the United States may be summarized as follows:

- The **total cost** of drilling and equipping oil and gas wells and dry holes in 1987 amounted to approximately $9,239 million, a decrease of 31.8 percent from 1986.

- The **average depth of oil wells** completed in 1987 was 4,215 feet, an increase of 1.1 percent; the **average cost per** foot in 1987 was $58.35, a decrease of 14.6 percent from the previous year.

- The **average depth of gas wells** completed in 1987 was 5,469 feet, a decrease of 2.7 percent; the **average cost per foot** in 1987 was $69.55, a decrease of 25.2 percent from the previous year.

- The **average depth of dry holes** drilled in 1987 was 5,075 feet, a decrease of 0.2 percent; the **average cost per foot** was $51.05, a decrease of 33.3 percent from 1986.

- The **total number of wells drilled** in 1987 decreased 11.1 percent and the **total footage drilled** decreased 10.7 percent.

- The **total cost of offshore wells** completed in 1987 amounted to approximately $2,053 million, a decrease of 42.9 percent from 1986. The **total number of offshore wells** decreased 21 percent from 1986 while the **average depth** decreased 1.1 percent. The **average cost per foot** in 1987 was $279.54 a decrease of 26.9 percent.

- The comparison of drilling activity and the cost of various types of wells completed in 1986 and 1987 is as follows:

	Oil Wells		Gas Wells	
	1986	1987	1986	1987
Wells Drilled	18,198	15,326	7,351	7,255
Footage Drilled (000)	75,847	64,602	41,324	39,674
Total Cost (millions)*	$5,184	$3,769	$3,844	$2,759
Average Depth (feet)	4,168	4,215	5,622	5,469
Average Cost Per Well*	$284,872	$245,950	$522,906	$380,354
Average Cost Per Foot*	$68.35	$58.35	$93.02	$69.55

	Dry Holes		Total Wells	
	1986	1987	1986	1987
Wells Drilled	11,624	10,460	37,173	33,041
Footage Drilled (000)	59,118	53,081	176,290	157,357
Total Cost (millions)*	$4,524	$2,710	$13,552	$9,239
Average Depth (feet)	5,086	5,075	4,742	4,762
Average Cost Per Well*	$389,232	$259,068	$364,577	$279,615
Average Cost Per Foot*	$76.53	$51.05	$76.88	$58.71

*Includes all costs incurred for drilling and equipping wells through the "Christmas tree."

NOTE: Totals may not agree with the sum of the individual items because of independent rounding.

DESCRIPTION OF SURVEY. The 1987 Joint Association Survey (JAS) contains information on drilling costs derived from a sample of wells, footage, and costs collected from operators of different sizes who drilled wells in various areas of the United States. The drilling costs reported are those incurred for drilling and equipping wells through the "Christmas tree."

Estimates of drilling costs were derived by combining sample data with the 1987 drilling statistics as compiled by the American Petroleum Institute (API) and the Committee on Statistics of Drilling of the American Association of Petroleum Geologists (AAPG-CSD). The procedures for preparing these estimates for the 1987 JAS are described in the following sections.

DEFINITIONS. Copies of the 1987 questionnaire, instructions, and definitions may be found in Appendixes B and C. Maps showing geographic subdivisions of Alaska, California, Louisiana, New Mexico, Texas, Offshore Federal Waters Alaska, Offshore Federal Waters Atlantic Coast, Offshore Federal Waters Gulf of Mexico-Northern, and Offshore Federal Waters Pacific Coast are shown in Appendix G.

THE 1987 UNIVERSE. In 1985, the American Petroleum Institute replaced its system of reporting well completions by month of report, (the Quarterly Review of Drilling Statistics), with a dynamic system of reporting wells by month of completion, (the Quarterly Completion Report). This change was instituted to correct the distortions in the data caused by the long lag time between the actual well completion and the reporting of the completion. As a result of these changes, there will be no "final" count of the survey year well completions until three to five years after the end of the survey year. The 1987 Joint Association Survey universe of wells is comprised of all wells reported to the American Petroleum Institute by Petroleum Information Corporation and by respondent operators through August 28, 1988 as having been completed during calendar year 1987. In prior years, survey year wells were added to the universe through the end of September of the publishing year to capture as many well completions as possible. However, as the number of additional wells reported during September has been relatively small, it was decided that earlier publication of the drilling cost estimates was of greater value than the additional wells added to the universe.

As the actual total number of well completions in any survey year is unknown for several years due to the lag in reporting, the API makes estimates of the number of total completions based on historic reporting patterns. The estimate of total well completions for 1987 based on reports received through the end of June, 1988 was 35,716 as compared to the 33,041 wells contained in the 1987 JAS universe.

THE 1987 SAMPLE. As in previous years, questionnaires were mailed to operators which were recorded as having drilled wells in the different areas of the United States during 1987. Replies to the Survey were contingent upon voluntary responses, with a continued effort being made to increase the sample size, particularly with respect to the smaller operators. An analysis of the number of companies (operators), classified by the number of wells drilled, included in the sample for the years 1983-1987 is shown in Appendix F.

The number of oil wells, gas wells, and dry holes reported to the JAS in 1986 and 1987 as percentages of total wells drilled in each of the six selected states is as follows:

	Percent of Total					
	Oil Wells		Gas Wells		Dry Holes	
	1986	1987	1986	1987	1986	1987
California	93	90	51	47	62	75
Kansas	26	34	31	58	34	37
Louisiana	40	52	39	44	44	46
New Mexico	62	63	69	54	41	52
Oklahoma	33	34	43	52	34	41
Texas	41	49	44	48	30	37

The following tabulation shows the total number of wells and footage reported to the JAS in 1986 and 1987 as compared to the wells and footage which comprised the JAS drilling universe for these two years.

	1986 Survey			1987 Survey		
	Total	Sample	Percent of Total	Total	Sample	Percent of Total
Oil Wells	18,198	8,379	46.0	15,326	7,810	51.0
Footage (thousands)	75,847	40,694	53.7	64,602	36,201	56.0
Total Cost (millions)	$5,184	$3,472	67.0	$3,769	$2,517	66.8
Gas Wells	7,351	2,867	39.0	7,255	3,042	41.9
Footage (thousands)	41,324	20,205	48.4	39,674	20,068	50.6
Total Cost (millions)	$3,844	$2,412	62.7	$2,759	$1,621	58.8
Dry Holes	11,624	4,047	34.8	10,460	4,177	39.9
Footage (thousands)	59,118	28,089	47.5	53,081	26,250	49.5
Total Cost (millions)	$4,524	$3,068	67.8	$2,710	$1,625	60.0
Total Wells	37,173	15,293	41.1	33,041	15,029	45.5
Footage (thousands)	176,290	88,989	50.5	157,357	82,519	52.4
Total Cost (millions)	$13,552	$8,952	66.1	$9,239	$5,763	62.4

NOTE: Totals may not agree with the sum of the individual items because of independent rounding.

DETERMINATION OF UNREPORTED WELLS AND FOOTAGE. Individual wells (and footage) derived by adjustment of QCR data were classified according to type of well (oil, gas or dry), location, and depth. Individual wells reported to the JAS were classified in like manner. The wells and footage reported to the JAS in each category were subtracted from the number of wells and footage in corresponding categories for the adjusted universe. The difference represented the unreported wells and footage by type of well, location, and depth interval.

ESTIMATION OF TOTAL COSTS. The average cost per foot drilled in each category was computed on the basis of information reported to the JAS. Based on the sample wells reported for each area, least squares regression analysis was used to determine the functional relationship between the cost per foot and well depth for each type of well. (See Appendix H for a description of the methodology.)

The cost per foot for the unreported wells in each category was then estimated from the least squares analysis for each area. For the relatively few unreported wells falling outside the depth range of the sample, for which regression analysis did not provide meaningful estimates, cost estimates were based on an analysis of costs in similar areas and of prior years' data. This was necessary for approximately 5.3 percent of all unreported wells.

The cost per foot for the unreported wells was then multiplied by the unreported footage in each depth range to obtain the unreported cost for each category. Total estimated expenditures were obtained by adding the reported costs to estimated unreported costs.

FINDINGS FOR 1987. Cost data are shown in Tables 1-53 for the Total United States, Total Onshore United States, and Total Offshore United States as well as for Offshore Federal Waters and Gulf of Mexico-Northern.

Those wells drilled in the Atlantic Coast Federal Waters, Alaska Federal Waters, and Pacific Coast Federal Waters are not shown separately to avoid disclosure of proprietary data, but are included in Table 52, "Offshore Federal Waters" on page 58. However, total wells, footage, and costs for these areas are shown in Table 1.

In addition, expenditures are reported for the individual states and for the subdivisions of Alaska, California, Louisiana, New Mexico, and Texas.

SUMMARY OF SAMPLE DATA FOR 1987. Additional information concerning the cost of exploratory, development, single completion, and multiple completion wells as reported to the Joint Association

Survey is summarized for the United States in Appendixes D and E.

Sample data in these four categories, summarized by depth intervals for individual states, may be purchased from the American Petroleum Institute on magnetic tape or in the form of a computer listing. Data in either format are summarized to the extent necessary to avoid disclosure of individual well costs.

Requests for price quotations should be directed to: the Manager, Exploration and Production Statistics, Finance, Accounting, and Statistics Department, American Petroleum Institute, 1220 L Street, Northwest, Washington, D.C. 20005. (Note: Orders will be accepted only for the complete summary.)

TABLES CONTAINING FINDINGS

Please note that the average depth and cost per well have not been rounded upward on the following tables.

TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND ESTIMATED DRILLING

Table 1

STATE	OIL WELLS			GAS WELLS		
	WELLS DRILLED	TOTAL FOOTAGE	COST	WELLS DRILLED	TOTAL FOOTAGE	COST
ALABAMA *	26	180,387	9,166,536	54	279,729	37,551,675
ALASKA - ONSHORE	129	1,323,153	280,951,757	2	4,730	1,087,900
ALASKA - OFFSHORE	2	19,257	6,758,398	1	7,510	2,330,425
ALASKA - TOTAL	131	1,342,410	287,710,155	3	12,240	3,418,325
ARKANSAS	62	281,819	10,041,213	170	756,098	42,797,284
CALIFORNIA - NORTH	3	13,337	900,000	68	467,403	30,268,837
CALIFORNIA -CENTRAL COASTAL	101	451,320	38,259,860	--	--	--
CALIFORNIA - EAST CENTRAL	1,970	3,357,555	210,199,620	4	21,000	835,838
CALIFORNIA - SOUTH	35	121,783	12,646,070	1	1,285	34,858
CALIFORNIA - OFFSHORE	33	254,643	186,350,717	--	--	--
CALIFORNIA - TOTAL	2,142	4,198,638	448,356,267	73	489,688	31,139,533
COLORADO	261	1,659,478	55,687,785	343	2,194,437	82,137,405
FLORIDA	5	70,003	10,794,282	--	--	--
ILLINOIS	677	1,545,368	49,888,639	18	10,960	316,145
INDIANA	108	158,738	4,010,408	12	12,185	555,129
KANSAS	1,223	3,351,785	85,977,666	435	1,275,805	49,656,213
KENTUCKY	184	345,545	8,307,599	261	576,715	25,216,773
LOUISIANA - NORTH	450	1,475,957	57,503,130	280	1,168,001	55,941,670
LOUISIANA - SOUTH	355	2,486,323	213,338,244	115	1,412,366	198,038,530
LOUISIANA - OFFSHORE	157	1,527,386	317,831,606	104	1,157,760	288,422,560
LOUISIANA - TOTAL	962	5,489,666	588,672,980	499	3,738,127	542,402,760
MICHIGAN	90	413,184	27,261,989	122	473,587	50,490,918
MISSISSIPPI	94	882,133	48,591,429	38	323,925	34,745,876
MONTANA	94	557,425	28,953,277	70	115,432	3,976,397
NEBRASKA	50	261,232	7,535,972	1	3,625	117,192
NEW MEXICO - EAST	312	2,010,813	106,336,023	122	749,297	48,967,213
NEW MEXICO - WEST	73	486,509	30,502,515	91	456,601	24,653,283
NEW MEXICO - TOTAL	385	2,497,322	136,838,538	213	1,205,898	73,620,496
NORTH DAKOTA	100	994,358	63,748,796	2	28,440	2,684,421
OKLAHOMA	1,580	7,277,617	342,026,614	968	6,503,162	433,318,393
TEXAS RRC DIST. 1	679	2,010,140	65,524,891	51	312,476	15,722,089
TEXAS RRC DIST. 2	81	442,720	17,767,083	152	1,037,141	85,442,626
TEXAS RRC DIST. 3	404	2,413,524	150,978,416	139	1,205,218	95,379,577
TEXAS RRC DIST. 4	85	455,455	16,340,547	404	3,710,680	361,366,191
TEXAS RRC DIST. 5	151	988,719	44,407,840	58	606,031	57,126,650
TEXAS RRC DIST. 6	184	925,625	44,633,474	175	1,469,697	105,192,437
TEXAS RRC DIST. 7B	690	2,209,923	61,319,333	247	750,298	28,671,340
TEXAS RRC DIST. 7C	358	1,961,937	93,542,057	139	900,548	33,001,183
TEXAS RRC DIST. 8	1,099	6,830,793	345,190,006	20	137,044	16,627,034
TEXAS RRC DIST. 8A	756	4,488,515	179,372,318	--	--	--
TEXAS RRC DIST. 9	711	2,135,240	57,240,470	67	341,248	13,043,362
TEXAS RRC DIST. 10	224	945,639	40,128,276	101	882,935	50,462,231
TEXAS - OFFSHORE	7	81,981	26,140,264	33	346,547	108,813,954
TEXAS - TOTAL	5,429	25,890,211	1,142,584,975	1,586	11,699,863	970,848,674
UTAH	50	329,056	29,156,878	22	160,648	19,035,587
WYOMING	331	1,707,748	99,881,977	59	463,402	32,753,355
APPALACHIAN **	1,274	4,786,979	121,479,582	2,208	9,115,506	291,582,609
OFFSHORE FED. - ALASKA	--	--	--	--	--	--
OFFSHORE FED. - ATLANTIC	--	--	--	--	--	--
OFFSHORE FED. - GULF NORTH	20	236,638	146,325,500	3	32,852	20,895,446
OFFSHORE FED. - PACIFIC	5	51,807	12,618,039	1	3,736	862,558
OFFSHORE FED - TOTAL	25	288,445	158,943,539	4	36,588	21,758,004
OTHER UNITED STATES ***	43	92,471	3,812,581	94	198,002	9,346,678
TOTAL OFFSHORE ****	224	2,171,712	696,024,524	142	1,548,405	421,324,943
TOTAL ONSHORE *	15,102	62,430,306	3,073,405,153	7,113	38,125,657	2,338,144,899
TOTAL U.S.	15,326	64,602,018	3,769,429,677	7,255	39,674,062	2,759,469,842
EXPLORATORY WELLS	880	5,420,577	305,844,176	712	4,784,745	469,131,767
DEVELOPMENT WELLS	14,446	59,181,441	3,463,585,501	6,543	34,889,317	2,290,338,075

* INCLUDES TWO WELLS FOR ALABAMA OFFSHORE.

** INCLUDES NEW YORK, OHIO, PENNSYLVANIA, AND WEST VIRGINIA.

*** INCLUDES ARIZONA, GEORGIA, IDAHO, IOWA, MARYLAND, MISSOURI, NEVADA, NORTH CAROLINA, OREGON, SOUTH DAKOTA TENNESSEE, VIRGINIA, AND WASHINGTON.

**** DOES NOT INCLUDE ALABAMA OFFSHORE.

COSTS FOR OIL AND GAS WELLS, AND DRY HOLES, BY STATE - 1987

Table 1

DRY HOLES			TOTAL WELLS			
WELLS DRILLED	TOTAL FOOTAGE	COST	WELLS DRILLED	TOTAL FOOTAGE	COST	STATE
107	695,961	28,268,970	187	1,156,077	74,987,181	ALABAMA *
5	33,028	6,217,615	136	1,360,911	288,257,272	ALASKA - ONSHORE
--	--	--	3	26,767	9,088,823	ALASKA - OFFSHORE
5	33,028	6,217,615	139	1,387,678	297,346,095	ALASKA - TOTAL
177	735,205	20,445,721	409	1,773,122	73,284,218	ARKANSAS
100	636,144	23,967,423	171	1,116,884	55,136,260	CALIFORNIA - NORTH
15	88,091	8,159,617	116	539,411	46,419,417	CALIFORNIA -CENTRAL COASTAL
96	395,140	26,517,394	2,070	3,773,695	237,552,852	CALIFORNIA - EAST CENTRAL
4	24,455	2,147,606	40	147,523	14,828,534	CALIFORNIA - SOUTH
8	69,719	48,181,710	41	324,362	234,532,427	CALIFORNIA - OFFSHORE
223	1,213,549	108,973,750	2,438	5,901,875	588,469,550	CALIFORNIA - TOTAL
281	1,578,902	44,878,513	885	5,432,817	182,703,703	COLORADO
5	62,754	3,256,245	10	132,757	14,050,527	FLORIDA
473	1,060,050	16,821,991	1,168	2,616,378	67,026,775	ILLINOIS
168	275,315	4,030,665	288	446,238	8,596,202	INDIANA
1,490	5,272,553	77,936,020	3,148	9,900,143	213,569,899	KANSAS
232	347,423	6,161,706	677	1,269,683	39,686,078	KENTUCKY
376	1,847,850	38,750,903	1,108	4,491,808	152,195,703	LOUISIANA - NORTH
326	3,347,924	245,178,878	796	7,246,613	656,555,652	LOUISIANA - SOUTH
228	2,470,204	546,359,043	489	5,155,350	1,152,613,209	LOUISIANA - OFFSHORE
932	7,665,978	830,288,824	2,393	16,893,771	1,961,364,564	LOUISIANA - TOTAL
309	1,619,363	90,820,102	521	2,506,134	168,573,009	MICHIGAN
181	1,378,431	48,568,667	313	2,584,489	131,905,972	MISSISSIPPI
118	554,766	20,638,547	282	1,227,623	53,568,221	MONTANA
138	785,591	18,091,026	189	1,050,448	25,744,190	NEBRASKA
123	853,771	37,525,684	557	3,613,881	192,828,920	NEW MEXICO - EAST
29	94,334	12,546,456	193	1,037,444	67,702,254	NEW MEXICO - WEST
152	948,105	50,072,140	750	4,651,325	260,531,174	NEW MEXICO - TOTAL
81	653,424	23,251,469	183	1,676,222	89,684,686	NORTH DAKOTA
1,049	5,693,218	224,297,088	3,597	19,473,997	999,642,095	OKLAHOMA
284	925,576	19,600,914	1,014	3,248,192	100,847,894	TEXAS RRC DIST. 1
220	1,343,525	47,252,523	453	2,823,386	150,462,232	TEXAS RRC DIST. 2
306	2,331,271	122,254,450	849	5,950,013	368,612,443	TEXAS RRC DIST. 3
290	1,995,591	102,117,624	779	6,161,726	479,824,362	TEXAS RRC DIST. 4
118	472,049	19,161,814	327	2,066,799	120,696,304	TEXAS RRC DIST. 5
212	1,358,690	51,664,508	571	3,754,012	201,490,419	TEXAS RRC DIST. 6
743	2,391,444	42,096,321	1,680	5,351,665	132,086,994	TEXAS RRC DIST. 7B
190	868,540	24,884,955	687	3,731,025	151,428,195	TEXAS RRC DIST. 7C
196	1,247,376	58,994,766	1,315	8,215,213	420,811,806	TEXAS RRC DIST. 8
257	1,679,260	52,031,288	1,013	6,167,775	231,403,606	TEXAS RRC DIST. 8A
629	2,127,469	39,191,578	1,407	4,603,957	109,475,410	TEXAS RRC DIST. 9
101	778,440	24,372,195	426	2,607,014	114,962,702	TEXAS RRC DIST. 10
58	588,404	145,925,148	98	1,016,932	280,879,366	TEXAS - OFFSHORE
3,604	18,107,635	749,548,084	10,619	55,697,709	2,862,981,733	TEXAS - TOTAL
43	201,055	9,625,602	115	690,759	57,818,067	UTAH
365	2,857,977	99,566,071	755	5,029,127	232,201,403	WYOMING
177	557,206	13,806,955	3,659	14,459,691	426,869,146	APPALACHIAN **
1	14,650	31,644,000	1	14,650	31,644,000	OFFSHORE FED. - ALASKA
--	--	--	--	--	--	OFFSHORE FED. - ATLANTIC
48	482,166	163,825,971	71	751,656	331,046,917	OFFSHORE FED. - GULF NORTH
--	--	--	6	55,543	13,480,597	OFFSHORE FED. - PACIFIC
49	496,816	195,469,971	78	821,849	376,171,514	OFFSHORE FED - TOTAL
101	286,223	18,814,208	238	576,696	31,973,467	OTHER UNITED STATES ***
343	3,625,143	935,935,872	709	7,345,260	2,053,285,339	TOTAL OFFSHORE ****
10,117	49,455,385	1,773,914,078	32,332	150,011,348	7,185,464,130	TOTAL ONSHORE *
10,460	53,080,528	2,709,849,950	33,041	157,356,608	9,238,749,469	TOTAL U.S.
4,944	27,161,212	1,467,572,948	6,536	37,366,534	2,242,548,891	EXPLORATORY WELLS
5,516	25,919,316	1,242,277,002	26,505	119,990,074	6,996,200,578	DEVELOPMENT WELLS

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TOTAL UNITED STATES *

Table 2

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		2,563	408	1,124	4,095				
FOOTAGE	0 - 1,249	2,252,933	340,909	849,433	3,443,275	879	836	756	841
COSTS $		90,338,719	11,134,296	16,190,187	117,663,202	35,247	27,290	14,404	28,733
WELLS		2,853	1,141	1,452	5,446				
FOOTAGE	1,250 - 2,499	4,951,487	2,155,258	2,673,617	9,780,362	1,736	1,889	1,841	1,796
COSTS $		204,178,076	87,861,437	56,156,615	348,196,128	71,566	77,004	38,675	63,936
WELLS		2,551	1,263	1,611	5,425				
FOOTAGE	2,500 - 3,749	8,000,860	4,028,562	5,101,565	17,130,987	3,136	3,190	3,167	3,158
COSTS $		293,179,381	172,669,170	115,529,435	581,377,986	114,927	136,714	71,713	107,166
WELLS		2,460	990	1,937	5,387				
FOOTAGE	3,750 - 4,999	10,832,476	4,331,078	8,441,070	23,604,624	4,403	4,375	4,358	4,382
COSTS $		377,980,849	153,291,258	193,046,173	724,318,280	153,651	154,840	99,662	134,457
WELLS		2,509	1,770	2,156	6,435				
FOOTAGE	5,000 - 7,499	15,362,250	10,834,148	13,203,063	39,399,461	6,123	6,121	6,124	6,123
COSTS $		693,569,461	423,031,714	383,142,399	1,499,743,574	276,433	239,001	177,710	233,060
WELLS		1,628	819	1,125	3,572				
FOOTAGE	7,500 - 9,999	14,240,178	7,089,814	9,653,126	30,983,118	8,747	8,657	8,581	8,674
COSTS $		953,077,118	458,270,092	442,413,779	1,853,760,989	585,428	559,548	393,257	518,970
WELLS		563	501	625	1,689				
FOOTAGE	10,000 - 12,499	6,213,841	5,549,221	6,878,087	18,641,149	11,037	11,076	11,005	11,037
COSTS $		724,196,791	538,424,368	509,932,535	1,772,553,694	1,286,318	1,074,699	815,892	1,049,469
WELLS		173	224	287	684				
FOOTAGE	12,500 - 14,999	2,332,394	3,019,993	3,885,556	9,237,943	13,482	13,482	13,539	13,506
COSTS $		362,425,307	420,543,650	486,656,872	1,269,625,829	2,094,944	1,877,427	1,695,669	1,856,178
WELLS		24	93	101	218				
FOOTAGE	15,000 - 17,499	379,254	1,480,563	1,610,349	3,470,166	15,802	15,920	15,944	15,918
COSTS $		66,533,245	291,530,726	277,752,836	635,816,807	2,772,219	3,134,739	2,750,028	2,916,591
WELLS		2	44	39	85				
FOOTAGE	17,500 - 19,999	36,345	802,008	717,675	1,556,028	18,173	18,227	18,402	18,306
COSTS $		3,950,730	184,610,865	183,442,133	372,003,728	1,975,365	4,195,702	4,703,645	4,376,515
WELLS		--	2	3	5				
FOOTAGE	20,000 & OVER	--	42,508	66,987	109,495	--	21,254	22,329	21,899
COSTS $		--	18,102,266	45,586,986	63,689,252	--	9,051,133	15,195,662	12,737,850
TOTAL WELLS		15,326	7,255	10,460	33,041				
TOTAL FOOTAGE		64,602,018	39,674,062	53,080,528	157,356,608	4,215	5,469	5,075	4,762
TOTAL COSTS $		3,769,429,677	2,759,469,842	2,709,849,950	9,238,749,469	245,950	380,354	259,068	279,615

* Includes the following states and areas which are not shown separately: Arizona, Georgia, Idaho, Iowa, Maryland, Missouri, Nevada, North Carolina, Oregon, South Dakota, Tennessee, Virginia, Washington, Alabama Offshore, Offshore Federal Waters-Alaska,and Offshore Federal Waters-Pacific Coast.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TOTAL OFFSHORE *

Table 3

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	--	--	1				
FOOTAGE	0 - 1,249	925	--	--	925	925	--	--	925
COSTS $		1,090,989	--	--	1,090,989	1,090,989	--	--	1,090,989
WELLS		--	1	1	2				
FOOTAGE	1,250 - 2,499	--	1,760	2,220	3,980	--	1,760	2,220	1,990
COSTS $		--	1,004,360	557,799	1,562,159	--	1,004,360	557,799	781,080
WELLS		4	4	9	17				
FOOTAGE	2,500 - 3,749	13,957	12,450	27,430	53,837	3,489	3,113	3,048	3,167
COSTS $		3,102,704	3,569,839	6,707,912	13,380,455	775,676	892,460	745,324	787,086
WELLS		9	2	17	28				
FOOTAGE	3,750 - 4,999	40,195	9,146	75,278	124,619	4,466	4,573	4,428	4,451
COSTS $		5,868,339	3,330,533	16,402,635	25,601,507	652,038	1,665,267	964,861	914,340
WELLS		36	24	51	111				
FOOTAGE	5,000 - 7,499	230,081	151,729	316,153	697,963	6,391	6,322	6,199	6,288
COSTS $		43,084,972	27,680,936	53,253,747	124,019,655	1,196,805	1,153,372	1,044,191	1,117,294
WELLS		69	28	73	170				
FOOTAGE	7,500 - 9,999	609,267	247,637	641,178	1,498,082	8,830	8,844	8,783	8,812
COSTS $		187,620,853	57,304,678	124,841,134	369,766,665	2,719,143	2,046,596	1,710,153	2,175,098
WELLS		66	30	76	172				
FOOTAGE	10,000 - 12,499	740,755	341,094	852,215	1,934,064	11,224	11,370	11,213	11,245
COSTS $		272,512,245	87,034,195	205,914,916	565,461,356	4,128,974	2,901,140	2,709,407	3,287,566
WELLS		35	32	75	142				
FOOTAGE	12,500 - 14,999	473,310	441,990	1,020,379	1,935,679	13,523	13,812	13,605	13,632
COSTS $		155,710,551	128,940,790	270,734,747	555,386,088	4,448,873	4,029,400	3,609,797	3,911,170
WELLS		4	17	29	50				
FOOTAGE	15,000 - 17,499	63,222	269,499	461,127	793,848	15,806	15,853	15,901	15,877
COSTS $		27,033,871	84,677,276	133,696,334	245,407,481	6,758,468	4,981,016	4,610,219	4,908,150
WELLS		--	4	11	15				
FOOTAGE	17,500 - 19,999	--	73,100	205,968	279,068	--	18,275	18,724	18,605
COSTS $		--	27,782,336	98,023,258	125,805,594	--	6,945,584	8,911,205	8,387,040
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	23,195	23,195	--	--	23,195	23,195
COSTS $		--	--	25,803,390	25,803,390	--	--	25,803,391	25,803,391
TOTAL WELLS		224	142	343	709				
TOTAL FOOTAGE		2,171,712	1,548,405	3,625,143	7,345,260	9,695	10,904	10,569	10,360
TOTAL COSTS $		696,024,524	421,324,943	935,935,872	2,053,285,339	3,107,252	2,967,077	2,728,676	2,896,030

* Includes Offshore Federal Waters-Alaska, and Offshore Federal Waters-Pacific Coast, which are not shown separately.
Note: Does not include Offshore Alabama.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TOTAL ONSHORE *

Table 4

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		2,562	408	1,124	4,094				
FOOTAGE	0 - 1,249	2,252,008	340,909	849,433	3,442,350	879	836	756	841
COSTS $		89,247,730	11,134,296	16,190,187	116,572,213	34,835	27,290	14,404	28,474
WELLS		2,853	1,140	1,451	5,444				
FOOTAGE	1,250 - 2,499	4,951,487	2,153,498	2,671,397	9,776,382	1,736	1,889	1,841	1,796
COSTS $		204,178,076	86,857,077	55,598,816	346,633,969	71,566	76,190	38,318	63,673
WELLS		2,547	1,259	1,602	5,408				
FOOTAGE	2,500 - 3,749	7,986,903	4,016,112	5,074,135	17,077,150	3,136	3,190	3,167	3,158
COSTS $		290,076,677	169,099,331	108,821,523	567,997,531	113,890	134,312	67,929	105,029
WELLS		2,451	988	1,920	5,359				
FOOTAGE	3,750 - 4,999	10,792,281	4,321,932	8,365,792	23,480,005	4,403	4,374	4,357	4,381
COSTS $		372,112,510	149,960,725	176,643,538	698,716,773	151,821	151,782	92,002	130,382
WELLS		2,473	1,746	2,105	6,324				
FOOTAGE	5,000 - 7,499	15,132,169	10,682,419	12,886,910	38,701,498	6,119	6,118	6,122	6,120
COSTS $		650,484,489	395,350,778	329,888,652	1,375,723,919	263,035	226,432	156,717	217,540
WELLS		1,559	791	1,052	3,402				
FOOTAGE	7,500 - 9,999	13,630,911	6,842,177	9,011,948	29,485,036	8,743	8,650	8,566	8,667
COSTS $		765,456,265	400,965,414	317,572,645	1,483,994,324	490,992	506,910	301,875	436,212
WELLS		497	471	549	1,517				
FOOTAGE	10,000 - 12,499	5,473,086	5,208,127	6,025,872	16,707,085	11,012	11,058	10,976	11,013
COSTS $		451,684,546	451,390,173	304,017,619	1,207,092,338	908,822	958,366	553,766	795,710
WELLS		138	192	212	542				
FOOTAGE	12,500 - 14,999	1,859,084	2,578,003	2,865,177	7,302,264	13,472	13,427	13,515	13,473
COSTS $		206,714,756	291,602,860	215,922,125	714,239,741	1,497,933	1,518,765	1,018,501	1,317,786
WELLS		20	76	72	168				
FOOTAGE	15,000 - 17,499	316,032	1,211,064	1,149,222	2,676,318	15,802	15,935	15,961	15,930
COSTS $		39,499,374	206,853,450	144,056,502	390,409,326	1,974,969	2,721,756	2,000,785	2,323,865
WELLS		2	40	28	70				
FOOTAGE	17,500 - 19,999	36,345	728,908	511,707	1,276,960	18,173	18,223	18,275	18,242
COSTS $		3,950,730	156,828,529	85,418,875	246,198,134	1,975,365	3,920,713	3,050,674	3,517,116
WELLS		--	2	2	4				
FOOTAGE	20,000 & OVER	--	42,508	43,792	86,300	--	21,254	21,896	21,575
COSTS $		--	18,102,266	19,783,596	37,885,862	--	9,051,133	9,891,798	9,471,466
TOTAL WELLS		15,102	7,113	10,117	32,332				
TOTAL FOOTAGE		62,430,306	38,125,657	49,455,385	150,011,348	4,134	5,360	4,888	4,640
TOTAL COSTS $		3,073,405,153	2,338,144,899	1,773,914,078	7,185,464,130	203,510	328,714	175,340	222,240

* Includes the following states and areas which are not shown separately: Arizona, Georgia, Idaho, Iowa, Maryland, Missouri, Nevada, North Carolina, Oregon, South Dakota, Tennessee, Virginia, Washington, and Alabama Offshore.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 5

ALABAMA *

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	2	1	3				
FOOTAGE	0 - 1,249	--	2,206	372	2,578	--	1,103	372	859
COSTS $		--	133,034	21,204	154,238	--	66,517	21,204	51,413
WELLS		1	26	29	56				
FOOTAGE	1,250 - 2,499	2,332	51,090	58,617	112,039	2,332	1,965	2,021	2,001
COSTS $		81,819	2,719,992	2,027,138	4,828,949	81,819	104,615	69,901	86,231
WELLS		4	10	23	37				
FOOTAGE	2,500 - 3,749	11,550	29,421	66,057	107,028	2,888	2,942	2,872	2,893
COSTS $		396,186	1,305,558	2,605,553	4,307,297	99,047	130,556	113,285	116,413
WELLS		4	5	8	17				
FOOTAGE	3,750 - 4,999	19,315	22,933	34,377	76,625	4,829	4,587	4,297	4,507
COSTS $		822,399	1,142,387	816,205	2,780,991	205,600	228,477	102,026	163,588
WELLS		12	2	14	28				
FOOTAGE	5,000 - 7,499	74,259	11,507	88,880	174,646	6,188	5,754	6,349	6,237
COSTS $		1,969,076	536,334	1,647,264	4,152,674	164,090	268,167	117,662	148,310
WELLS		--	--	1	1				
FOOTAGE	7,500 - 9,999	--	--	8,300	8,300	--	--	8,300	8,300
COSTS $		--	--	200,423	200,423	--	--	200,423	200,423
WELLS		--	--	2	2				
FOOTAGE	10,000 - 12,499	--	--	24,350	24,350	--	--	12,175	12,175
COSTS $		--	--	1,104,814	1,104,814	--	--	552,407	552,407
WELLS		4	1	21	26				
FOOTAGE	12,500 - 14,999	56,981	13,240	283,463	353,684	14,245	13,240	13,498	13,603
COSTS $		4,673,525	905,872	12,825,383	18,404,780	1,168,381	905,872	610,733	707,876
WELLS		1	1	6	8				
FOOTAGE	15,000 - 17,499	15,950	17,100	94,909	127,959	15,950	17,100	15,818	15,995
COSTS $		1,223,531	1,328,157	4,303,923	6,855,611	1,223,531	1,328,157	717,321	856,951
WELLS		--	6	2	8				
FOOTAGE	17,500 - 19,999	--	110,624	36,636	147,260	--	18,437	18,318	18,408
COSTS $		--	18,833,463	2,717,063	21,550,526	--	3,138,911	1,358,532	2,693,816
WELLS		--	1	--	1				
FOOTAGE	20,000 & OVER	--	21,608	--	21,608	--	21,608	--	21,608
COSTS $		--	10,646,878	--	10,646,878	--	10,646,878	--	10,646,878
TOTAL WELLS		26	54	107	187				
TOTAL FOOTAGE		180,387	279,729	695,961	1,156,077	6,938	5,180	6,504	6,182
TOTAL COSTS $		9,166,536	37,551,675	28,268,970	74,987,181	352,559	695,401	264,196	401,001

* Includes two wells for Alabama Offshore, a gas well in depth range 11 and a dry hole in depth range 3.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

ALASKA - TOTAL

Table 6

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	2	--	2				
FOOTAGE	1,250 - 2,499	--	4,730	--	4,730	--	2,365	--	2,365
COSTS $		--	1,087,900	--	1,087,900	--	543,950	--	543,950
WELLS		--	--	1	1				
FOOTAGE	2,500 - 3,749	--	--	3,740	3,740	--	--	3,740	3,740
COSTS $		--	--	710,376	710,376	--	--	710,376	710,376
WELLS		--	--	2	2				
FOOTAGE	3,750 - 4,999	--	--	7,934	7,934	--	--	3,967	3,967
COSTS $		--	--	1,487,994	1,487,994	--	--	743,997	743,997
WELLS		16	--	--	16				
FOOTAGE	5,000 - 7,499	114,964	--	--	114,964	7,185	--	--	7,185
COSTS $		23,885,403	--	--	23,885,403	1,492,838	--	--	1,492,838
WELLS		48	1	--	49				
FOOTAGE	7,500 - 9,999	433,967	7,510	--	441,477	9,041	7,510	--	9,010
COSTS $		73,240,964	2,330,425	--	75,571,389	1,525,853	2,330,425	--	1,542,273
WELLS		49	--	2	51				
FOOTAGE	10,000 - 12,499	552,522	--	21,354	573,876	11,276	--	10,677	11,252
COSTS $		124,249,689	--	4,019,245	128,268,934	2,535,708	--	2,009,623	2,515,077
WELLS		17	--	--	17				
FOOTAGE	12,500 - 14,999	225,307	--	--	225,307	13,253	--	--	13,253
COSTS $		61,867,478	--	--	61,867,478	3,639,264	--	--	3,639,264
WELLS		1	--	--	1				
FOOTAGE	15,000 - 17,499	15,650	--	--	15,650	15,650	--	--	15,650
COSTS $		4,466,621	--	--	4,466,621	4,466,621	--	--	4,466,621
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		131	3	5	139				
TOTAL FOOTAGE		1,342,410	12,240	33,028	1,387,678	10,247	4,080	6,606	9,983
TOTAL COSTS $		287,710,155	3,418,325	6,217,615	297,346,095	2,196,261	1,139,442	1,243,523	2,139,181

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

ALASKA - ONSHORE

Table 7

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	2	--	2				
FOOTAGE	1,250 - 2,499	--	4,730	--	4,730	--	2,365	--	2,365
COSTS $		--	1,087,900	--	1,087,900	--	543,950	--	543,950
WELLS		--	--	1	1				
FOOTAGE	2,500 - 3,749	--	--	3,740	3,740	--	--	3,740	3,740
COSTS $		--	--	710,376	710,376	--	--	710,376	710,376
WELLS		--	--	2	2				
FOOTAGE	3,750 - 4,999	--	--	7,934	7,934	--	--	3,967	3,967
COSTS $		--	--	1,487,994	1,487,994	--	--	743,997	743,997
WELLS		15	--	--	15				
FOOTAGE	5,000 - 7,499	107,590	--	--	107,590	7,173	--	--	7,173
COSTS $		20,142,740	--	--	20,142,740	1,342,849	--	--	1,342,849
WELLS		48	--	--	48				
FOOTAGE	7,500 - 9,999	433,967	--	--	433,967	9,041	--	--	9,041
COSTS $		73,240,964	--	--	73,240,964	1,525,853	--	--	1,525,853
WELLS		48	--	2	50				
FOOTAGE	10,000 - 12,499	540,639	--	21,354	561,993	11,263	--	10,677	11,240
COSTS $		121,233,954	--	4,019,245	125,253,199	2,525,708	--	2,009,623	2,505,064
WELLS		17	--	--	17				
FOOTAGE	12,500 - 14,999	225,307	--	--	225,307	13,253	--	--	13,253
COSTS $		61,867,478	--	--	61,867,478	3,639,264	--	--	3,639,264
WELLS		1	--	--	1				
FOOTAGE	15,000 - 17,499	15,650	--	--	15,650	15,650	--	--	15,650
COSTS $		4,466,621	--	--	4,466,621	4,466,621	--	--	4,466,621
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		129	2	5	136				
TOTAL FOOTAGE		1,323,153	4,730	33,028	1,360,911	10,257	2,365	6,606	10,007
TOTAL COSTS $		280,951,757	1,087,900	6,217,615	288,257,272	2,177,921	543,950	1,243,523	2,119,539

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

ALASKA - OFFSHORE

Table 8

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	2,500 - 3,749	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	3,750 - 4,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		1	--	--	1				
FOOTAGE	5,000 - 7,499	7,374	--	--	7,374	7,374	--	--	7,374
COSTS $		3,742,663	--	--	3,742,663	3,742,663	--	--	3,742,663
WELLS		--	1	--	1				
FOOTAGE	7,500 - 9,999	--	7,510	--	7,510	--	7,510	--	7,510
COSTS $		--	2,330,425	--	2,330,425	--	2,330,425	--	2,330,425
WELLS		1	--	--	1				
FOOTAGE	10,000 - 12,499	11,883	--	--	11,883	11,883	--	--	11,883
COSTS $		3,015,735	--	--	3,015,735	3,015,735	--	--	3,015,735
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		2	1	--	3				
TOTAL FOOTAGE		19,257	7,510	--	26,767	9,629	7,510	--	8,922
TOTAL COSTS $		6,758,398	2,330,425	--	9,088,823	3,379,199	2,330,425	--	3,029,608

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

ARKANSAS

Table 9

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		2	14	25	41				
FOOTAGE	0 - 1,249	2,312	11,031	19,291	32,634	1,156	788	772	796
COSTS $		76,800	508,052	388,373	973,225	38,400	36,289	15,535	23,737
WELLS		5	30	20	55				
FOOTAGE	1,250 - 2,499	8,228	61,478	38,786	108,492	1,646	2,049	1,939	1,973
COSTS $		333,288	2,923,028	886,226	4,142,542	66,658	97,434	44,311	75,319
WELLS		25	25	46	96				
FOOTAGE	2,500 - 3,749	77,520	70,296	143,161	290,977	3,101	2,812	3,112	3,031
COSTS $		2,074,417	3,206,665	2,674,009	7,955,091	82,977	128,267	58,131	82,866
WELLS		8	25	28	61				
FOOTAGE	3,750 - 4,999	32,160	106,046	122,907	261,113	4,020	4,242	4,390	4,281
COSTS $		1,007,652	5,839,184	3,149,763	9,996,599	125,957	233,567	112,492	163,879
WELLS		14	57	40	111				
FOOTAGE	5,000 - 7,499	89,165	344,664	246,401	680,230	6,369	6,047	6,160	6,128
COSTS $		2,718,882	20,155,845	6,585,552	29,460,279	194,206	353,611	164,639	265,408
WELLS		6	17	16	39				
FOOTAGE	7,500 - 9,999	50,708	139,706	140,993	331,407	8,451	8,218	8,812	8,498
COSTS $		2,353,464	8,380,620	4,533,694	15,267,778	392,244	492,978	283,356	391,482
WELLS		2	2	2	6				
FOOTAGE	10,000 - 12,499	21,726	22,877	23,666	68,269	10,863	11,439	11,833	11,378
COSTS $		1,476,710	1,783,890	2,228,104	5,488,704	738,355	891,945	1,114,052	914,784
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		62	170	177	409				
TOTAL FOOTAGE		281,819	756,098	735,205	1,773,122	4,545	4,448	4,154	4,335
TOTAL COSTS $		10,041,213	42,797,284	20,445,721	73,284,218	161,955	251,749	115,513	179,179

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

CALIFORNIA - TOTAL

Table 10

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		838	--	34	872				
FOOTAGE	0 - 1,249	816,581	--	31,278	847,859	974	--	920	972
COSTS $		49,956,978	--	1,763,718	51,720,696	59,615	--	51,874	59,313
WELLS		864	2	20	886				
FOOTAGE	1,250 - 2,499	1,386,277	2,695	32,498	1,421,470	1,604	1,348	1,625	1,604
COSTS $		82,308,742	77,104	1,487,723	83,873,569	95,265	38,552	74,386	94,665
WELLS		263	5	18	286				
FOOTAGE	2,500 - 3,749	783,263	14,499	57,197	854,959	2,978	2,900	3,178	2,989
COSTS $		48,192,234	733,294	2,713,569	51,639,097	183,240	146,659	150,754	180,556
WELLS		58	7	31	96				
FOOTAGE	3,750 - 4,999	243,555	30,794	138,473	412,822	4,199	4,399	4,467	4,300
COSTS $		20,214,595	1,549,250	4,160,216	25,924,061	348,528	221,321	134,201	270,042
WELLS		43	33	59	135				
FOOTAGE	5,000 - 7,499	268,858	207,789	363,466	840,113	6,253	6,297	6,160	6,223
COSTS $		25,038,151	12,656,973	28,215,967	65,911,091	582,283	383,545	478,237	488,230
WELLS		52	21	33	106				
FOOTAGE	7,500 - 9,999	425,365	179,511	283,651	888,527	8,180	8,548	8,595	8,382
COSTS $		94,483,641	11,763,653	17,977,864	124,225,158	1,816,993	560,174	544,784	1,171,936
WELLS		21	5	24	50				
FOOTAGE	10,000 - 12,499	234,056	54,400	252,261	540,717	11,146	10,880	10,511	10,814
COSTS $		116,314,277	4,359,259	42,740,885	163,414,421	5,538,775	871,852	1,780,870	3,268,289
WELLS		3	--	3	6				
FOOTAGE	12,500 - 14,999	40,683	--	39,650	80,333	13,561	--	13,217	13,389
COSTS $		11,847,649	--	7,802,249	19,649,898	3,949,216	--	2,600,750	3,274,983
WELLS		--	--	1	1				
FOOTAGE	15,000 - 17,499	--	--	15,075	15,075	--	--	15,075	15,075
COSTS $		--	--	2,111,559	2,111,559	--	--	2,111,559	2,111,559
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		2,142	73	223	2,438				
TOTAL FOOTAGE		4,198,638	489,688	1,213,549	5,901,875	1,960	6,708	5,442	2,421
TOTAL COSTS $		448,356,267	31,139,533	108,973,750	588,469,550	209,317	426,569	488,672	241,374

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 11

CALIFORNIA - NORTH

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	1,250 - 2,499	--	--	1	1				
FOOTAGE		--	--	2,100	2,100	--	--	2,100	2,100
COSTS $		--	--	108,149	108,149	--	--	108,149	108,149
WELLS	2,500 - 3,749	--	4	9	13				
FOOTAGE		--	11,299	29,430	40,729	--	2,825	3,270	3,133
COSTS $		--	608,879	769,947	1,378,826	--	152,220	85,550	106,064
WELLS	3,750 - 4,999	3	6	20	29				
FOOTAGE		13,337	26,004	[illegible]	128,967	4,446	4,334	4,481	4,447
COSTS $		900,000	1,258,371	2,170,242	4,328,613	300,000	209,729	108,512	149,263
WELLS	5,000 - 7,499	--	33	40	73				
FOOTAGE		--	207,789	245,408	453,197	--	6,297	6,135	6,208
COSTS $		--	12,656,973	9,535,310	22,192,283	--	383,545	238,383	304,004
WELLS	7,500 - 9,999	--	21	22	43				
FOOTAGE		--	179,511	186,295	365,806	--	8,548	8,468	8,507
COSTS $		--	11,763,653	7,298,987	19,062,640	--	560,174	331,772	443,317
WELLS	10,000 - 12,499	--	4	8	12				
FOOTAGE		--	42,800	83,285	126,085	--	10,700	10,411	10,507
COSTS $		--	3,980,961	4,084,788	8,065,749	--	995,240	510,599	672,146
WELLS	12,500 - 14,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		3	68	100	171				
TOTAL FOOTAGE		13,337	467,403	636,144	1,116,884	4,446	6,874	6,361	6,531
TOTAL COSTS $		900,000	30,268,837	23,967,423	55,136,260	300,000	445,130	239,674	322,434

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

CALIFORNIA -CENTRAL COASTAL

Table 12

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	1	1				
FOOTAGE	0 - 1,249	--	--	1,245	1,245	--	--	1,245	1,245
COSTS $		--	--	45,186	45,186	--	--	45,186	45,186
WELLS		39	--	2	41				
FOOTAGE	1,250 - 2,499	78,981	--	4,218	83,199	2,025	--	2,109	2,029
COSTS $		6,923,324	--	320,253	7,243,577	177,521	--	160,127	176,673
WELLS		22	--	3	25				
FOOTAGE	2,500 - 3,749	62,104	--	9,327	71,431	2,823	--	3,109	2,857
COSTS $		4,645,476	--	674,487	5,319,963	211,158	--	224,829	212,799
WELLS		7	--	1	8				
FOOTAGE	3,750 - 4,999	30,835	--	4,901	35,736	4,405	--	4,901	4,467
COSTS $		3,778,322	--	323,506	4,101,828	539,760	--	323,506	512,729
WELLS		10	--	3	13				
FOOTAGE	5,000 - 7,499	60,754	--	18,926	79,680	6,075	--	6,309	6,129
COSTS $		5,057,508	--	1,398,594	6,456,102	505,751	--	466,198	496,623
WELLS		14	--	2	16				
FOOTAGE	7,500 - 9,999	117,512	--	16,422	133,934	8,394	--	8,211	8,371
COSTS $		8,739,362	--	1,119,999	9,859,361	624,240	--	560,000	616,210
WELLS		9	--	2	11				
FOOTAGE	10,000 - 12,499	101,134	--	20,552	121,686	11,237	--	10,276	11,062
COSTS $		9,115,868	--	1,363,343	10,479,211	1,012,874	--	681,672	952,656
WELLS		--	--	1	1				
FOOTAGE	12,500 - 14,999	--	--	12,500	12,500	--	--	12,500	12,500
COSTS $		--	--	2,914,249	2,914,249	--	--	2,914,249	2,914,249
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		101	--	15	116				
TOTAL FOOTAGE		451,320	--	88,091	539,411	4,469	--	5,873	4,650
TOTAL COSTS $		38,259,860	--	8,159,617	46,419,477	378,811	--	543,974	400,168

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

CALIFORNIA - EAST CENTRAL

Table 13

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		836	--	33	869				
FOOTAGE	0 - 1,249	814,464	--	30,033	844,497	974	--	910	972
COSTS $		48,176,065	--	1,718,532	49,894,597	57,627	--	52,077	57,416
WELLS		811	1	17	829				
FOOTAGE	1,250 - 2,499	1,279,036	1,410	26,180	1,306,626	1,577	1,410	1,540	1,576
COSTS $		72,494,022	42,246	1,059,321	73,595,589	89,388	42,246	62,313	88,776
WELLS		236	1	5	242				
FOOTAGE	2,500 - 3,749	705,488	3,200	15,190	723,878	2,989	3,200	3,038	2,991
COSTS $		41,409,580	124,415	750,551	42,284,546	175,464	124,415	150,110	174,730
WELLS		33	1	10	44				
FOOTAGE	3,750 - 4,999	132,853	4,790	43,946	181,589	4,026	4,790	4,395	4,127
COSTS $		9,347,058	290,879	1,666,468	11,304,405	283,244	290,879	166,647	256,918
WELLS		20	--	12	32				
FOOTAGE	5,000 - 7,499	129,914	--	76,592	206,506	6,496	--	6,383	6,453
COSTS $		12,778,082	--	3,097,320	15,875,402	638,904	--	258,110	496,106
WELLS		27	--	6	33				
FOOTAGE	7,500 - 9,999	211,263	--	54,363	265,626	7,825	--	9,061	8,049
COSTS $		20,272,650	--	4,073,689	24,346,339	750,839	--	678,948	737,768
WELLS		5	1	10	16				
FOOTAGE	10,000 - 12,499	57,129	11,600	106,611	175,340	11,426	11,600	10,661	10,959
COSTS $		2,764,745	378,298	7,151,954	10,294,997	552,949	378,298	715,195	643,437
WELLS		2	--	2	4				
FOOTAGE	12,500 - 14,999	27,408	--	27,150	54,558	13,704	--	13,575	13,640
COSTS $		2,957,418	--	4,888,000	7,845,418	1,478,709	--	2,444,000	1,961,355
WELLS		--	--	1	1				
FOOTAGE	15,000 - 17,499	--	--	15,075	15,075	--	--	15,075	15,075
COSTS $		--	--	2,111,559	2,111,559	--	--	2,111,559	2,111,559
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		1,970	4	96	2,070				
TOTAL FOOTAGE		3,357,555	21,000	395,140	3,773,695	1,704	5,250	4,116	1,823
TOTAL COSTS $		210,199,620	835,838	26,517,394	237,552,852	106,700	208,960	276,223	114,760

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

CALIFORNIA - SOUTH

Table 14

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	--	--	1				
FOOTAGE	0 - 1,249	1,192	--	--	1,192	1,192	--	--	1,192
COSTS $		689,924	--	--	689,924	689,924	--	--	689,924
WELLS		14	1	--	15				
FOOTAGE	1,250 - 2,499	28,260	1,285	--	29,545	2,019	1,285	--	1,970
COSTS $		2,891,396	34,858	--	2,926,254	206,528	34,858	--	195,084
WELLS		4	--	1	5				
FOOTAGE	2,500 - 3,749	12,040	--	3,250	15,290	3,010	--	3,250	3,058
COSTS $		1,725,444	--	518,584	2,244,028	431,361	--	518,584	448,806
WELLS		9	--	--	9				
FOOTAGE	3,750 - 4,999	39,265	--	--	39,265	4,363	--	--	4,363
COSTS $		3,541,990	--	--	3,541,990	393,554	--	--	393,554
WELLS		6	--	2	8				
FOOTAGE	5,000 - 7,499	33,474	--	11,800	45,274	5,579	--	5,900	5,659
COSTS $		3,295,386	--	774,150	4,069,536	549,231	--	387,075	508,692
WELLS		1	--	1	2				
FOOTAGE	7,500 - 9,999	7,552	--	9,405	16,957	7,552	--	9,405	8,479
COSTS $		501,930	--	854,872	1,356,802	501,930	--	854,872	678,401
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		35	1	4	40				
TOTAL FOOTAGE		121,783	1,285	24,455	147,523	3,480	1,285	6,114	3,688
TOTAL COSTS $		12,646,070	34,858	2,147,606	14,828,534	361,316	34,858	536,902	370,713

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 15

CALIFORNIA - OFFSHORE

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	--	--	1				
FOOTAGE	0 - 1,249	925	--	--	925	925	--	--	925
COSTS $		1,090,989	--	--	1,090,989	1,090,989	--	--	1,090,989
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		1	--	--	1				
FOOTAGE	2,500 - 3,749	3,631	--	--	3,631	3,631	--	--	3,631
COSTS $		411,734	--	--	411,734	411,734	--	--	411,734
WELLS		6	--	--	6				
FOOTAGE	3,750 - 4,999	27,265	--	--	27,265	4,544	--	--	4,544
COSTS $		2,647,225	--	--	2,647,225	441,204	--	--	441,204
WELLS		7	--	2	9				
FOOTAGE	5,000 - 7,499	44,716	--	10,740	55,456	6,388	--	5,370	6,162
COSTS $		3,907,175	--	13,410,593	17,317,768	558,168	--	6,705,297	1,924,197
WELLS		10	--	2	12				
FOOTAGE	7,500 - 9,999	89,038	--	17,166	106,204	8,904	--	8,583	8,850
COSTS $		64,969,699	--	4,630,317	69,600,016	6,496,970	--	2,315,159	5,800,002
WELLS		7	--	4	11				
FOOTAGE	10,000 - 12,499	75,793	--	41,813	117,606	10,828	--	10,453	10,691
COSTS $		104,433,664	--	30,140,800	134,574,464	14,919,095	--	7,535,200	12,234,042
WELLS		1	--	--	1				
FOOTAGE	12,500 - 14,999	13,275	--	--	13,275	13,275	--	--	13,275
COSTS $		8,890,231	--	--	8,890,231	8,890,231	--	--	8,890,231
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		33	--	8	41				
TOTAL FOOTAGE		254,643	--	69,719	324,362	7,716	--	8,715	7,911
TOTAL COSTS $		186,350,717	--	48,181,710	234,532,427	5,646,992	--	6,022,714	5,720,303

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

COLORADO

Table 16

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	--	5	6				
FOOTAGE	0 - 1,249	1,196	--	2,872	4,068	1,196	--	574	678
COSTS $		66,485	--	174,064	240,549	66,485	--	34,813	40,092
WELLS		1	24	5	30				
FOOTAGE	1,250 - 2,499	2,300	48,308	10,834	61,442	2,300	2,013	2,167	2,048
COSTS $		101,728	5,244,436	527,880	5,874,044	101,728	218,518	105,576	195,801
WELLS		7	38	15	60				
FOOTAGE	2,500 - 3,749	22,974	116,242	46,763	185,979	3,282	3,059	3,118	3,100
COSTS $		893,177	6,639,944	1,288,944	8,822,065	127,597	174,735	85,930	147,034
WELLS		23	3	50	76				
FOOTAGE	3,750 - 4,999	106,988	13,166	236,503	356,657	4,652	4,389	4,730	4,693
COSTS $		3,532,479	507,920	4,286,154	8,321,553	153,586	167,640	85,723	109,494
WELLS		210	228	186	624				
FOOTAGE	5,000 - 7,499	1,374,491	1,601,020	1,104,964	4,080,475	6,545	7,022	5,941	6,539
COSTS $		46,325,148	52,112,231	20,276,357	118,713,736	220,596	228,562	109,013	190,246
WELLS		19	48	18	85				
FOOTAGE	7,500 - 9,999	151,529	389,500	144,724	685,753	7,975	8,115	8,040	8,068
COSTS $		4,768,768	15,662,006	2,607,126	23,037,900	250,988	326,292	144,840	271,034
WELLS		--	1	1	2				
FOOTAGE	10,000 - 12,499	--	10,670	10,150	20,820	--	10,670	10,150	10,410
COSTS $		--	242,628	168,150	410,778	--	242,628	168,150	205,389
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	--	1				
FOOTAGE	15,000 - 17,499	--	15,531	--	15,531	--	15,531	--	15,531
COSTS $		--	1,733,240	--	1,733,240	--	1,733,240	--	1,733,240
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	22,092	22,092	--	--	22,092	22,092
COSTS $		--	--	15,549,838	15,549,838	--	--	15,549,838	15,549,838
TOTAL WELLS		261	343	281	885				
TOTAL FOOTAGE		1,659,478	2,194,437	1,578,902	5,432,817	6,358	6,398	5,619	6,139
TOTAL COSTS $		55,687,785	82,137,405	44,878,513	182,703,703	213,363	239,468	159,710	206,445

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 17

FLORIDA

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	1,250 - 2,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	2,500 - 3,749	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	3,750 - 4,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	5,000 - 7,499	--	--	1	1				
FOOTAGE		--	--	6,800	6,800	--	--	6,800	6,800
COSTS $		--	--	168,896	168,896	--	--	168,896	168,896
WELLS	7,500 - 9,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	10,000 - 12,499	1	--	1	2				
FOOTAGE		11,846	--	11,900	23,746	11,846	--	11,900	11,873
COSTS $		1,128,487	--	1,263,467	2,391,954	1,128,487	--	1,263,467	1,195,977
WELLS	12,500 - 14,999	3	--	1	4				
FOOTAGE		42,277	--	12,540	54,817	14,092	--	12,540	13,704
COSTS $		7,304,000	--	707,652	8,011,652	2,434,667	--	707,652	2,002,913
WELLS	15,000 - 17,499	1	--	2	3				
FOOTAGE		15,880	--	31,514	47,394	15,880	--	15,757	15,798
COSTS $		2,361,795	--	1,116,230	3,478,025	2,361,795	--	558,115	1,159,342
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		5	--	5	10				
TOTAL FOOTAGE		70,003	--	62,754	132,757	14,001	--	12,551	13,276
TOTAL COSTS $		10,794,282	--	3,256,245	14,050,527	2,158,857	--	651,249	1,405,053

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ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

ILLINOIS

Table 18

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		202	17	140	359				
FOOTAGE	0 - 1,249	189,689	8,317	95,357	293,363	939	489	681	817
COSTS $		8,010,837	244,916	1,446,019	9,701,772	39,658	14,407	10,329	27,024
WELLS		122	--	93	215				
FOOTAGE	1,250 - 2,499	215,271	--	179,701	394,972	1,765	--	1,932	1,837
COSTS $		7,673,375	--	2,802,756	10,476,131	62,897	--	30,137	48,726
WELLS		316	1	203	520				
FOOTAGE	2,500 - 3,749	990,340	2,643	628,485	1,621,468	3,134	2,643	3,096	3,118
COSTS $		28,706,892	71,229	10,155,700	38,933,821	90,845	71,229	50,028	74,873
WELLS		37	--	34	71				
FOOTAGE	3,750 - 4,999	150,068	--	139,881	289,949	4,056	--	4,114	4,084
COSTS $		5,497,535	--	2,133,417	7,630,952	148,582	--	62,748	107,478
WELLS		--	--	3	3				
FOOTAGE	5,000 - 7,499	--	--	16,826	16,626	--	--	5,542	5,542
COSTS $		--	--	284,099	284,099	--	--	94,700	94,700
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		677	18	473	1,168				
TOTAL FOOTAGE		1,545,368	10,960	1,060,050	2,616,378	2,283	609	2,241	2,240
TOTAL COSTS $		49,888,639	316,145	16,821,991	67,026,775	73,691	17,564	35,564	57,386

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 19

INDIANA

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	44	10	55	109				
FOOTAGE		36,188	8,746	46,244	91,178	822	875	841	836
COSTS $		1,089,756	279,900	715,496	2,085,152	24,767	27,990	13,009	19,130
WELLS	1,250 - 2,499	53	2	84	139				
FOOTAGE		91,653	3,439	146,933	242,025	1,729	1,720	1,749	1,741
COSTS $		2,233,903	275,229	2,140,762	4,649,894	42,149	137,615	25,485	33,452
WELLS	2,500 - 3,749	11	--	29	40				
FOOTAGE		30,897	--	82,138	113,035	2,809	--	2,832	2,826
COSTS $		686,749	--	1,174,407	1,861,156	62,432	--	40,497	46,529
WELLS	3,750 - 4,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	5,000 - 7,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	7,500 - 9,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	10,000 - 12,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	12,500 - 14,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		108	12	168	288				
TOTAL FOOTAGE		158,738	12,185	275,315	446,238	1,470	1,015	1,639	1,549
TOTAL COSTS $		4,010,408	555,129	4,030,665	8,596,202	37,133	46,261	23,992	29,848

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

KANSAS

Table 20

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		433	70	172	675				
FOOTAGE	0 - 1,249	359,003	57,177	141,328	557,508	829	817	822	826
COSTS $		6,033,071	1,354,164	1,278,220	8,665,455	13,933	19,345	7,432	12,838
WELLS		130	95	186	411				
FOOTAGE	1,250 - 2,499	223,006	145,793	306,502	675,301	1,715	1,535	1,648	1,643
COSTS $		5,214,674	4,649,279	4,060,120	13,924,073	40,113	48,940	21,829	33,879
WELLS		245	175	335	755				
FOOTAGE	2,500 - 3,749	811,170	514,145	1,109,776	2,435,091	3,311	2,938	3,313	3,225
COSTS $		19,533,285	24,064,952	16,623,347	60,221,584	79,728	137,514	49,622	79,764
WELLS		311	9	612	932				
FOOTAGE	3,750 - 4,999	1,352,894	38,541	2,659,058	4,050,493	4,350	4,282	4,345	4,346
COSTS $		34,581,885	1,346,320	37,035,448	72,963,653	111,196	149,591	60,515	78,287
WELLS		104	86	185	375				
FOOTAGE	5,000 - 7,499	605,712	520,149	1,055,889	2,181,750	5,824	6,048	5,708	5,818
COSTS $		20,614,751	18,241,498	18,938,885	57,795,134	198,219	212,110	102,372	154,120
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		1,223	435	1,490	3,148				
TOTAL FOOTAGE		3,351,785	1,275,805	5,272,553	9,900,143	2,741	2,933	3,539	3,145
TOTAL COSTS $		85,977,666	49,656,213	77,936,020	213,569,899	70,301	114,152	52,306	67,843

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

KENTUCKY

Table 21

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		46	26	108	180				
FOOTAGE	0 - 1,249	39,466	19,230	78,215	136,911	858	740	724	761
COSTS $		775,878	467,164	1,126,918	2,369,960	16,867	17,968	10,434	13,166
WELLS		97	159	97	353				
FOOTAGE	1,250 - 2,499	169,739	292,884	183,359	645,982	1,750	1,842	1,890	1,830
COSTS $		3,955,830	12,397,010	3,377,086	19,729,926	40,782	77,969	34,815	55,892
WELLS		34	56	23	113				
FOOTAGE	2,500 - 3,749	100,642	183,873	68,456	352,971	2,960	3,283	2,976	3,124
COSTS $		2,624,282	9,056,439	1,269,703	12,950,424	77,185	161,722	55,204	114,606
WELLS		5	20	4	29				
FOOTAGE	3,750 - 4,999	19,529	80,728	17,393	117,650	3,906	4,036	4,348	4,057
COSTS $		495,849	3,296,160	387,999	4,180,008	99,170	164,808	97,000	144,138
WELLS		1	--	--	1				
FOOTAGE	5,000 - 7,499	7,243	--	--	7,243	7,243	--	--	7,243
COSTS $		208,030	--	--	208,030	208,030	--	--	208,030
WELLS		1	--	--	1				
FOOTAGE	7,500 - 9,999	8,926	--	--	8,926	8,926	--	--	8,926
COSTS $		247,730	--	--	247,730	247,730	--	--	247,730
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		184	261	232	677				
TOTAL FOOTAGE		345,545	576,715	347,423	1,269,683	1,878	2,210	1,498	1,875
TOTAL COSTS $		8,307,599	25,216,773	6,161,706	39,686,078	45,150	96,616	26,559	58,621

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

LOUISIANA - TOTAL

Table 22

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		132	20	12	164				
FOOTAGE	0 - 1,249	133,247	17,444	10,629	161,320	1,009	872	886	984
COSTS $		4,579,378	564,962	284,174	5,428,514	34,692	28,248	23,681	33,101
WELLS		110	129	43	282				
FOOTAGE	1,250 - 2,499	205,689	288,647	83,947	578,283	1,870	2,238	1,952	2,051
COSTS $		13,178,202	10,397,858	2,643,517	26,219,577	119,802	80,604	61,477	92,977
WELLS		164	39	116	319				
FOOTAGE	2,500 - 3,749	518,389	114,826	356,844	990,059	3,161	2,944	3,076	3,104
COSTS $		23,574,625	6,272,673	8,803,192	38,650,490	143,748	160,838	75,890	121,161
WELLS		92	22	95	209				
FOOTAGE	3,750 - 4,999	401,126	97,910	408,564	907,600	4,360	4,450	4,301	4,343
COSTS $		19,516,340	6,366,915	16,323,686	42,206,941	212,134	289,405	171,828	201,947
WELLS		132	50	171	353				
FOOTAGE	5,000 - 7,499	838,214	317,567	1,076,480	2,232,261	6,350	6,351	6,295	6,324
COSTS $		78,845,655	31,505,697	43,046,813	153,398,165	597,316	630,114	251,736	434,556
WELLS		169	66	160	395				
FOOTAGE	7,500 - 9,999	1,437,751	582,032	1,381,672	3,401,455	8,507	8,819	8,635	8,611
COSTS $		158,907,630	49,007,448	94,403,466	302,318,544	940,282	742,537	590,022	765,363
WELLS		112	75	161	348				
FOOTAGE	10,000 - 12,499	1,241,980	844,173	1,789,514	3,875,667	11,089	11,256	11,115	11,137
COSTS $		154,654,678	102,299,231	208,748,385	465,702,294	1,380,845	1,363,990	1,296,574	1,338,225
WELLS		45	54	110	209				
FOOTAGE	12,500 - 14,999	614,978	734,953	1,490,944	2,840,875	13,666	13,610	13,554	13,593
COSTS $		114,500,382	133,200,265	212,323,097	460,023,744	2,544,453	2,466,672	1,930,210	2,201,071
WELLS		5	28	50	83				
FOOTAGE	15,000 - 17,499	80,647	447,924	805,913	1,334,484	16,129	15,997	16,118	16,078
COSTS $		18,384,027	112,731,989	163,134,274	294,250,190	3,676,806	4,026,139	3,262,686	3,545,183
WELLS		1	16	14	31				
FOOTAGE	17,500 - 19,999	17,645	292,651	261,471	571,767	17,645	18,291	18,677	18,444
COSTS $		2,532,063	90,055,822	80,578,220	173,166,105	2,532,063	5,628,489	5,755,587	5,586,004
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		962	499	932	2,393				
TOTAL FOOTAGE		5,089,666	3,738,127	7,665,978	16,893,771	5,707	7,491	8,225	7,060
TOTAL COSTS $		588,372,980	542,402,760	830,288,824	1,961,364,564	611,926	1,086,980	890,868	819,626

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 23

LOUISIANA - NORTH

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	132	20	11	163				
FOOTAGE		133,247	17,444	9,589	160,280	1,009	872	872	983
COSTS $		4,579,378	564,962	170,823	5,315,163	34,692	28,248	15,529	32,608
WELLS	1,250 - 2,499	46	126	29	201				
FOOTAGE		90,590	284,077	60,857	435,524	1,969	2,255	2,099	2,167
COSTS $		3,082,789	8,516,707	983,002	12,582,498	67,017	67,593	33,897	62,599
WELLS	2,500 - 3,749	131	34	103	268				
FOOTAGE		413,853	99,966	317,246	831,065	3,159	2,940	3,080	3,101
COSTS $		14,624,634	2,936,786	5,279,819	22,841,239	111,638	86,376	51,260	85,229
WELLS	3,750 - 4,999	68	19	75	162				
FOOTAGE		294,614	83,769	320,722	699,105	4,333	4,409	4,276	4,315
COSTS $		9,034,276	2,714,396	5,684,645	17,433,317	132,857	142,863	75,795	107,613
WELLS	5,000 - 7,499	48	29	113	190				
FOOTAGE		295,400	185,319	708,555	1,189,274	6,154	6,390	6,270	6,259
COSTS $		10,328,090	7,708,507	11,771,073	29,807,670	215,169	265,811	104,169	156,882
WELLS	7,500 - 9,999	11	35	35	81				
FOOTAGE		96,644	306,541	298,790	701,975	8,786	8,758	8,537	8,666
COSTS $		4,337,322	15,691,027	8,626,275	28,654,624	394,302	448,315	246,465	353,761
WELLS	10,000 - 12,499	14	15	11	40				
FOOTAGE		151,609	163,713	118,591	433,913	10,829	10,914	10,781	10,848
COSTS $		11,516,641	14,821,285	4,740,081	31,078,007	822,617	988,086	430,916	776,950
WELLS	12,500 - 14,999	--	2	1	3				
FOOTAGE		--	27,172	13,500	40,672	--	13,586	13,500	13,557
COSTS $		--	2,988,000	1,495,185	4,483,185	--	1,494,000	1,495,185	1,494,395
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		450	280	378	1,108				
TOTAL FOOTAGE		1,475,957	1,168,001	1,847,850	4,491,808	3,280	4,171	4,888	4,054
TOTAL COSTS $		57,503,130	55,941,670	38,750,903	152,195,703	127,785	199,792	102,516	137,361

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

LOUISIANA - SOUTH

Table 24

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	1	1				
FOOTAGE	0 - 1,249	--	--	1,040	1,040	--	--	1,040	1,040
COSTS $		--	--	113,351	113,351	--	--	113,351	113,351
WELLS		64	2	14	80				
FOOTAGE	1,250 - 2,499	115,099	2,810	23,090	140,999	1,798	1,405	1,649	1,762
COSTS $		10,095,413	876,791	1,660,515	12,632,719	157,741	438,396	118,608	157,909
WELLS		30	2	10	42				
FOOTAGE	2,500 - 3,749	94,210	6,146	29,351	129,707	3,140	3,073	2,935	3,088
COSTS $		6,259,021	628,606	1,502,696	8,390,323	208,634	314,303	150,270	199,770
WELLS		21	1	10	32				
FOOTAGE	3,750 - 4,999	93,582	4,995	43,412	141,989	4,456	4,995	4,341	4,437
COSTS $		7,260,950	321,986	2,125,307	9,708,243	345,760	321,986	212,531	303,383
WELLS		57	1	25	83				
FOOTAGE	5,000 - 7,499	371,843	7,374	159,518	538,735	6,524	7,374	6,381	6,491
COSTS $		35,192,409	461,524	7,278,529	42,932,462	617,411	461,524	291,141	517,259
WELLS		104	17	83	204				
FOOTAGE	7,500 - 9,999	865,617	151,520	720,413	1,737,550	8,323	8,913	8,680	8,517
COSTS $		62,629,795	11,610,101	33,472,947	107,712,843	602,210	682,947	403,289	528,004
WELLS		56	41	89	186				
FOOTAGE	10,000 - 12,499	620,777	461,106	987,164	2,069,047	11,085	11,246	11,092	11,124
COSTS $		58,399,391	37,175,716	55,550,862	151,125,969	1,042,846	906,725	624,167	812,505
WELLS		19	25	59	103				
FOOTAGE	12,500 - 14,999	258,772	333,525	797,531	1,389,828	13,620	13,341	13,517	13,493
COSTS $		25,247,255	36,851,418	66,505,519	128,604,192	1,328,803	1,474,057	1,127,212	1,248,584
WELLS		3	14	27	44				
FOOTAGE	15,000 - 17,499	48,778	225,339	438,798	712,915	16,259	16,096	16,252	16,203
COSTS $		5,721,947	47,838,902	55,501,341	109,062,190	1,907,316	3,417,065	2,055,605	2,478,686
WELLS		1	12	8	21				
FOOTAGE	17,500 - 19,999	17,645	219,551	147,607	384,803	17,645	18,296	18,451	18,324
COSTS $		2,532,063	62,273,486	21,467,811	86,273,360	2,532,063	5,189,457	2,683,477	4,108,255
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		355	115	326	796				
TOTAL FOOTAGE		2,486,323	1,412,366	3,347,924	7,246,613	7,004	12,281	10,270	9,104
TOTAL COSTS $		213,338,244	198,038,530	245,178,878	656,555,652	600,953	1,722,074	752,082	824,819

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

LOUISIANA - OFFSHORE

Table 25

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	1,250 - 2,499	--	1	--	1				
FOOTAGE		--	1,760	--	1,760	--	1,760	--	1,760
COSTS $		--	1,004,360	--	1,004,360	--	1,004,360	--	1,004,360
WELLS	2,500 - 3,749	3	3	3	9				
FOOTAGE		10,326	8,714	10,247	29,287	3,442	2,905	3,416	3,254
COSTS $		2,690,970	2,707,281	2,020,677	7,418,928	896,990	902,427	673,559	824,325
WELLS	3,750 - 4,999	3	2	10	15				
FOOTAGE		12,930	9,146	44,430	66,506	4,310	4,573	4,443	4,434
COSTS $		3,221,114	3,330,533	8,513,734	15,065,381	1,073,705	1,665,267	851,373	1,004,359
WELLS	5,000 - 7,499	27	20	33	80				
FOOTAGE		170,971	124,874	208,407	504,252	6,332	6,244	6,315	6,303
COSTS $		33,325,156	23,335,666	23,997,211	80,658,033	1,234,265	1,166,783	727,188	1,008,225
WELLS	7,500 - 9,999	54	14	42	110				
FOOTAGE		475,490	123,971	362,469	961,930	8,805	8,855	8,630	8,745
COSTS $		91,940,513	21,706,320	52,304,244	165,951,077	1,702,602	1,550,451	1,245,339	1,508,646
WELLS	10,000 - 12,499	42	19	61	122				
FOOTAGE		469,594	219,354	683,759	1,372,707	11,181	11,545	11,209	11,252
COSTS $		84,738,646	50,302,230	148,457,442	283,498,318	2,017,587	2,647,486	2,433,729	2,323,757
WELLS	12,500 - 14,999	26	27	50	103				
FOOTAGE		356,206	374,256	679,913	1,410,375	13,700	13,861	13,598	13,693
COSTS $		89,253,127	93,360,847	144,322,393	326,936,367	3,432,813	3,457,809	2,886,448	3,174,140
WELLS	15,000 - 17,499	2	14	23	39				
FOOTAGE		31,869	222,585	367,115	621,569	15,935	15,899	15,962	15,938
COSTS $		12,662,080	64,892,987	107,632,933	185,188,000	6,331,040	4,635,214	4,679,693	4,748,411
WELLS	17,500 - 19,999	--	4	6	10				
FOOTAGE		--	73,100	113,864	186,964	--	18,275	18,977	18,696
COSTS $		--	27,782,336	59,110,409	86,892,745	--	6,945,584	9,851,735	8,689,275
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		157	104	228	489				
TOTAL FOOTAGE		1,527,386	1,157,760	2,470,204	5,155,350	9,729	11,132	10,834	10,543
TOTAL COSTS $		317,831,606	288,422,560	546,359,043	1,152,613,209	2,024,405	2,773,294	2,396,312	2,357,082

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

MICHIGAN

Table 26

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	9	2	11				
FOOTAGE		--	9,403	651	10,054	--	1,045	326	914
COSTS $		--	425,996	33,938	459,934	--	47,333	16,969	41,812
WELLS	1,250 - 2,499	4	67	11	82				
FOOTAGE		8,542	106,112	21,516	136,170	2,136	1,584	1,956	1,661
COSTS $		508,114	4,733,412	944,030	6,185,556	127,029	70,648	85,821	75,434
WELLS	2,500 - 3,749	24	4	56	84				
FOOTAGE		79,353	12,006	186,723	278,082	3,306	3,002	3,334	3,311
COSTS $		4,432,429	689,743	8,214,345	13,336,517	184,685	172,436	146,685	158,768
WELLS	3,750 - 4,999	40	6	109	155				
FOOTAGE		172,869	24,980	470,695	668,544	4,322	4,163	4,318	4,313
COSTS $		10,332,987	1,267,721	20,160,540	31,761,248	258,325	211,287	184,959	204,911
WELLS	5,000 - 7,499	19	13	100	132				
FOOTAGE		124,436	86,533	633,155	844,124	6,549	6,656	6,332	6,395
COSTS $		8,494,628	6,441,073	30,141,706	45,077,407	447,086	495,467	301,417	341,496
WELLS	7,500 - 9,999	2	11	15	28				
FOOTAGE		16,018	94,534	130,303	240,855	8,009	8,594	8,687	8,602
COSTS $		1,330,169	10,670,817	12,690,218	24,691,204	665,085	970,074	846,015	881,829
WELLS	10,000 - 12,499	1	11	16	28				
FOOTAGE		11,966	127,519	176,320	315,805	11,966	11,593	11,020	11,279
COSTS $		2,163,662	23,730,531	18,635,325	44,529,518	2,163,662	2,157,321	1,164,708	1,590,340
WELLS	12,500 - 14,999	--	1	--	1				
FOOTAGE		--	12,500	--	12,500	--	12,500	--	12,500
COSTS $		--	2,531,625	--	2,531,625	--	2,531,625	--	2,531,625
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		90	122	309	521				
TOTAL FOOTAGE		413,184	473,587	1,619,363	2,506,134	4,591	3,882	5,241	4,810
TOTAL COSTS $		27,261,989	50,490,918	90,820,102	168,573,009	302,911	413,860	293,916	323,557

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

MISSISSIPPI

Table 27

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	1	1				
FOOTAGE	0 - 1,249	--	--	576	576	--	--	576	576
COSTS $		--	--	26,035	26,035	--	--	26,035	26,035
WELLS		1	7	5	13				
FOOTAGE	1,250 - 2,499	2,160	14,947	10,037	27,144	2,160	2,135	2,007	2,088
COSTS $		122,753	823,405	295,785	1,241,943	122,753	117,629	59,157	95,534
WELLS		--	5	10	15				
FOOTAGE	2,500 - 3,749	--	14,110	32,240	46,350	--	2,822	3,224	3,090
COSTS $		--	699,617	839,320	1,538,937	--	139,923	83,932	102,596
WELLS		5	2	24	31				
FOOTAGE	3,750 - 4,999	22,392	7,957	107,386	137,735	4,478	3,979	4,474	4,443
COSTS $		947,804	365,128	2,183,336	3,496,268	189,561	182,564	90,972	112,783
WELLS		31	8	77	116				
FOOTAGE	5,000 - 7,499	199,438	53,395	492,129	744,962	6,433	6,674	6,391	6,422
COSTS $		6,678,449	1,604,291	8,793,213	17,075,953	215,434	200,536	114,198	147,206
WELLS		20	--	19	39				
FOOTAGE	7,500 - 9,999	170,512	--	157,877	328,389	8,526	--	8,309	8,420
COSTS $		8,468,710	--	3,856,294	12,325,004	423,436	--	202,963	316,026
WELLS		14	2	24	40				
FOOTAGE	10,000 - 12,499	159,676	21,049	271,095	451,820	11,405	10,525	11,296	11,296
COSTS $		8,627,573	957,604	8,705,280	18,290,457	616,255	478,802	362,720	457,261
WELLS		19	5	12	36				
FOOTAGE	12,500 - 14,999	262,427	68,424	164,011	494,862	13,812	13,685	13,668	13,746
COSTS $		18,043,492	4,553,916	8,235,381	30,832,789	949,658	910,783	686,282	856,466
WELLS		4	8	8	20				
FOOTAGE	15,000 - 17,499	65,528	125,543	125,093	316,164	16,382	15,693	15,637	15,808
COSTS $		5,702,648	20,479,590	12,864,285	39,046,523	1,425,662	2,559,949	1,608,036	1,952,326
WELLS		--	1	1	2				
FOOTAGE	17,500 - 19,999	--	18,500	17,987	36,487	--	18,500	17,987	18,244
COSTS $		--	5,262,325	2,769,738	8,032,063	--	5,262,325	2,769,738	4,016,032
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		94	38	181	313				
TOTAL FOOTAGE		882,133	323,925	1,378,431	2,584,489	9,384	8,524	7,616	8,257
TOTAL COSTS $		48,591,429	34,745,876	48,568,667	131,905,972	516,930	914,365	268,335	421,425

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

MONTANA

Table 28

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		2	19	18	39				
FOOTAGE	0 - 1,249	1,994	16,459	18,715	37,168	997	866	1,040	953
COSTS $		77,920	545,761	370,441	994,122	38,960	28,724	20,580	25,490
WELLS		32	43	29	104				
FOOTAGE	1,250 - 2,499	55,593	68,240	49,308	173,141	1,737	1,587	1,700	1,665
COSTS $		2,208,421	1,936,928	1,009,390	5,154,739	69,013	45,045	34,807	49,565
WELLS		8	6	7	21				
FOOTAGE	2,500 - 3,749	25,795	16,377	20,784	62,956	3,224	2,730	2,969	2,998
COSTS $		1,136,583	480,944	543,320	2,160,847	142,073	80,157	77,617	102,897
WELLS		4	--	16	20				
FOOTAGE	3,750 - 4,999	17,755	--	71,308	89,063	4,439	--	4,457	4,453
COSTS $		653,291	--	1,804,159	2,457,450	163,323	--	112,760	122,873
WELLS		7	1	17	25				
FOOTAGE	5,000 - 7,499	46,271	6,213	103,310	155,794	6,610	6,213	6,077	6,232
COSTS $		2,973,838	381,681	3,310,004	6,665,523	424,834	381,681	194,706	266,621
WELLS		23	1	20	44				
FOOTAGE	7,500 - 9,999	204,126	8,143	166,924	379,193	8,875	8,143	8,346	8,618
COSTS $		10,107,929	631,083	8,463,727	19,202,739	439,475	631,083	423,186	436,426
WELLS		15	--	9	24				
FOOTAGE	10,000 - 12,499	167,243	--	98,431	265,674	11,150	--	10,937	11,070
COSTS $		9,371,223	--	4,111,414	13,482,637	624,748	--	456,824	561,777
WELLS		3	--	2	5				
FOOTAGE	12,500 - 14,999	38,648	--	25,986	64,634	12,883	--	12,993	12,927
COSTS $		2,424,072	--	1,026,092	3,450,164	808,024	--	513,046	690,033
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		94	70	118	282				
TOTAL FOOTAGE		557,425	115,432	554,766	1,227,623	5,930	1,649	4,701	4,353
TOTAL COSTS $		28,953,277	3,976,397	20,638,547	-53,568,221	308,014	56,806	174,903	189,958

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

NEBRASKA

Table 29

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	1	1				
FOOTAGE		--	--	300	300	--	--	300	300
COSTS $		--	--	19,054	19,054	--	--	19,054	19,054
WELLS	1,250 - 2,499	--	--	1	1				
FOOTAGE		--	--	1,760	1,760	--	--	1,760	1,760
COSTS $		--	--	57,608	57,608	--	--	57,608	57,608
WELLS	2,500 - 3,749	3	1	8	12				
FOOTAGE		10,232	3,625	26,672	40,529	3,411	3,625	3,334	3,377
COSTS $		373,817	117,192	430,474	921,483	124,606	117,192	53,809	76,790
WELLS	3,750 - 4,999	29	--	48	77				
FOOTAGE		128,082	--	211,404	339,486	4,417	--	4,404	4,409
COSTS $		2,904,964	--	2,485,367	5,390,331	100,171	--	51,778	70,004
WELLS	5,000 - 7,499	13	--	55	68				
FOOTAGE		80,958	--	345,434	426,392	6,228	--	6,281	6,270
COSTS $		1,917,748	--	6,445,022	8,362,770	147,519	--	117,182	122,982
WELLS	7,500 - 9,999	5	--	25	30				
FOOTAGE		41,960	--	200,021	241,981	8,392	--	8,001	8,066
COSTS $		2,339,443	--	8,653,501	10,992,944	467,889	--	346,140	366,431
WELLS	10,000 - 12,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	12,500 - 14,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		50	1	138	189				
TOTAL FOOTAGE		261,232	3,625	785,591	1,050,448	5,225	3,625	5,693	5,558
TOTAL COSTS $		7,535,972	117,192	18,091,026	25,744,190	150,719	117,192	131,094	136,213

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

NEW MEXICO - TOTAL

Table 30

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	--	10	11				
FOOTAGE	0 - 1,249	850	--	4,688	5,538	850	--	469	503
COSTS $		41,743	--	171,516	213,259	41,743	--	17,152	19,387
WELLS		18	6	22	46				
FOOTAGE	1,250 - 2,499	37,039	11,493	40,928	89,460	2,058	1,916	1,860	1,945
COSTS $		1,518,421	1,285,297	1,460,442	4,264,160	84,357	214,216	66,384	92,699
WELLS		33	82	19	134				
FOOTAGE	2,500 - 3,749	109,261	277,592	61,100	447,953	3,311	3,385	3,216	3,343
COSTS $		5,459,968	16,268,207	2,410,592	24,138,767	165,454	198,393	126,873	180,140
WELLS		127	41	28	196				
FOOTAGE	3,750 - 4,999	549,579	179,141	121,243	849,963	4,327	4,369	4,330	4,337
COSTS $		23,247,854	7,186,424	5,624,661	36,058,939	183,054	175,279	200,881	183,974
WELLS		58	39	18	115				
FOOTAGE	5,000 - 7,499	354,244	239,205	115,568	709,017	6,108	6,133	6,420	6,165
COSTS $		19,871,519	11,774,267	7,997,752	39,643,538	342,612	301,904	444,320	344,726
WELLS		91	18	17	126				
FOOTAGE	7,500 - 9,999	788,767	150,894	145,876	1,085,537	8,668	8,383	8,581	8,615
COSTS $		47,677,704	6,532,968	9,008,172	63,218,844	523,931	362,943	529,893	501,737
WELLS		46	11	27	84				
FOOTAGE	10,000 - 12,499	510,659	121,659	305,696	938,014	11,101	11,060	11,322	11,167
COSTS $		28,061,867	7,457,083	14,448,182	49,967,132	610,041	677,917	535,118	594,847
WELLS		10	12	8	30				
FOOTAGE	12,500 - 14,999	131,651	165,095	105,522	402,268	13,165	13,758	13,190	13,409
COSTS $		9,177,453	17,023,682	5,584,245	31,785,380	917,745	1,418,640	698,031	1,059,513
WELLS		1	4	3	8				
FOOTAGE	15,000 - 17,499	15,272	60,819	47,484	123,575	15,272	15,205	15,828	15,447
COSTS $		1,782,009	6,092,568	3,366,578	11,241,155	1,782,009	1,523,142	1,122,193	1,405,144
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		385	213	152	750				
TOTAL FOOTAGE		2,497,322	1,205,898	948,105	4,651,325	6,487	5,661	6,238	6,202
TOTAL COSTS $		136,838,538	73,620,496	50,072,140	260,531,174	355,425	345,636	329,422	347,375

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

NEW MEXICO - WEST

Table 31

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	6	6				
FOOTAGE		--	--	3,478	3,478	--	--	580	580
COSTS $		--	--	93,571	93,571	--	--	15,595	15,595
WELLS	1,250 - 2,499	3	5	11	19				
FOOTAGE		6,811	9,408	19,276	35,495	2,270	1,882	1,752	1,868
COSTS $		264,000	997,722	643,850	1,905,572	88,000	199,544	58,532	100,293
WELLS	2,500 - 3,749	--	30	2	32				
FOOTAGE		--	99,592	6,037	105,629	--	3,320	3,019	3,301
COSTS $		--	7,172,097	320,504	7,492,601	--	239,070	160,252	234,144
WELLS	3,750 - 4,999	12	12	3	27				
FOOTAGE		57,845	50,637	12,466	120,948	4,820	4,220	4,155	4,480
COSTS $		2,708,314	2,080,262	1,390,755	6,179,331	225,693	173,355	463,585	228,864
WELLS	5,000 - 7,499	25	30	4	59				
FOOTAGE		152,811	183,389	26,789	362,989	6,112	6,113	6,697	6,152
COSTS $		8,072,921	9,300,084	3,657,499	21,030,504	322,917	310,003	914,375	356,449
WELLS	7,500 - 9,999	33	14	2	49				
FOOTAGE		269,042	113,575	16,158	398,775	8,153	8,113	8,079	8,138
COSTS $		19,457,280	5,103,118	3,769,816	28,330,214	589,615	364,508	1,884,908	578,168
WELLS	10,000 - 12,499	--	--	1	1				
FOOTAGE		--	--	10,130	10,130	--	--	10,130	10,130
COSTS $		--	--	2,670,461	2,670,461	--	--	2,670,461	2,670,461
WELLS	12,500 - 14,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		73	91	29	193				
TOTAL FOOTAGE		486,509	456,601	94,334	1,037,444	6,665	5,018	3,253	5,375
TOTAL COSTS $		30,502,515	24,653,283	12,546,456	67,702,254	417,843	270,915	432,636	350,789

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

NEW MEXICO - EAST

Table 32

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1	--	4	5				
FOOTAGE	0 - 1,249	850	--	1,210	2,060	850	--	303	412
COSTS $		41,743	--	77,945	119,688	41,743	--	19,486	23,938
WELLS		15	1	11	27				
FOOTAGE	1,250 - 2,499	30,228	2,085	21,652	53,965	2,015	2,085	1,968	1,999
COSTS $		1,254,421	287,575	816,592	2,358,588	83,628	287,575	74,236	87,355
WELLS		33	52	17	102				
FOOTAGE	2,500 - 3,749	109,261	178,000	55,063	342,324	3,311	3,423	3,239	3,356
COSTS $		5,459,968	9,096,110	2,090,088	16,646,166	165,454	174,925	122,946	163,198
WELLS		115	29	25	169				
FOOTAGE	3,750 - 4,999	491,734	128,504	108,777	729,015	4,276	4,431	4,351	4,314
COSTS $		20,539,540	5,106,162	4,233,906	29,879,608	178,605	176,075	169,356	176,802
WELLS		33	9	14	56				
FOOTAGE	5,000 - 7,499	201,433	55,816	88,779	346,028	6,104	6,202	6,341	6,179
COSTS $		11,798,598	2,474,183	4,340,253	18,613,034	357,533	274,909	310,018	332,376
WELLS		58	4	15	77				
FOOTAGE	7,500 - 9,999	519,725	37,319	129,718	686,762	8,961	9,330	8,648	8,919
COSTS $		28,220,424	1,429,850	5,238,356	34,888,630	486,559	357,463	349,224	453,099
WELLS		46	11	26	83				
FOOTAGE	10,000 - 12,499	510,659	121,659	295,566	927,884	11,101	11,060	11,368	11,179
COSTS $		28,061,867	7,457,083	11,777,721	47,296,671	610,041	677,917	452,989	569,839
WELLS		10	12	8	30				
FOOTAGE	12,500 - 14,999	131,651	165,095	105,522	402,268	13,165	13,758	13,190	13,409
COSTS $		9,177,453	17,023,682	5,584,245	31,785,380	917,745	1,418,640	698,031	1,059,513
WELLS		1	4	3	8				
FOOTAGE	15,000 - 17,499	15,272	60,819	47,484	123,575	15,272	15,205	15,828	15,447
COSTS $		1,782,009	6,092,568	3,366,578	11,241,155	1,782,009	1,523,142	1,122,193	1,405,144
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		312	122	123	557				
TOTAL FOOTAGE		2,010,813	749,297	853,771	3,613,881	6,445	6,142	6,941	6,488
TOTAL COSTS $		106,336,023	48,967,213	37,525,684	192,828,920	340,821	401,371	305,087	346,192

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

NORTH DAKOTA

Table 33

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	--	--				
FOOTAGE		--	--	--	--				
COSTS $		--	--	--	--	--	--	--	--
						--	--	--	--
WELLS	1,250 - 2,499	--	--	1	1				
FOOTAGE		--	--	1,273	1,273	--	--	1,273	1,273
COSTS $		--	--	19,308	19,308	--	--	19,308	19,308
WELLS	2,500 - 3,749	4	--	1	5				
FOOTAGE		12,976	--	3,170	16,146	3,244	--	3,170	3,229
COSTS $		625,139	--	51,998	677,137	156,285	--	51,998	135,427
WELLS	3,750 - 4,999	4	--	8	12				
FOOTAGE		18,154	--	35,970	54,124	4,539	--	4,496	4,510
COSTS $		928,970	--	663,645	1,592,615	232,243	--	82,956	132,718
WELLS	5,000 - 7,499	8	--	23	31				
FOOTAGE		49,250	--	139,166	188,416	6,156	--	6,051	6,078
COSTS $		2,108,761	--	2,910,769	5,019,530	263,595	--	126,555	161,920
WELLS	7,500 - 9,999	36	--	30	66				
FOOTAGE		331,479	--	268,524	600,003	9,208	--	8,951	9,091
COSTS $		17,790,177	--	9,126,328	26,916,505	494,172	--	304,211	407,826
WELLS	10,000 - 12,499	29	--	15	44				
FOOTAGE		329,003	--	166,105	495,108	11,345	--	11,074	11,252
COSTS $		21,449,344	--	7,313,319	28,762,663	739,633	--	487,555	653,697
WELLS	12,500 - 14,999	19	2	3	24				
FOOTAGE		253,496	28,440	39,216	321,152	13,342	14,220	13,072	13,381
COSTS $		20,846,405	2,684,421	3,166,102	26,696,928	1,097,179	1,342,211	1,055,367	1,112,372
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--				
COSTS $		--	--	--	--	--	--	--	--
						--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--				
COSTS $		--	--	--	--	--	--	--	--
						--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--				
COSTS $		--	--	--	--	--	--	--	--
						--	--	--	--
TOTAL WELLS		100	2	81	183				
TOTAL FOOTAGE		994,358	28,440	653,424	1,676,222	9,944	14,220	8,067	9,160
TOTAL COSTS $		63,748,796	2,684,421	23,251,469	89,684,686	637,488	1,342,211	287,055	490,080

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

OKLAHOMA

Table 34

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		161	70	41	272				
FOOTAGE	0 - 1,249	148,897	70,913	29,538	249,348	925	1,013	720	917
COSTS $		4,973,788	2,447,697	536,786	7,958,271	30,893	34,967	13,092	29,258
WELLS		391	123	165	679				
FOOTAGE	1,250 - 2,499	686,908	227,669	312,623	1,227,200	1,757	1,851	1,895	1,807
COSTS $		23,986,024	8,352,671	6,199,124	38,537,819	61,345	67,908	37,570	56,757
WELLS		239	102	171	512				
FOOTAGE	2,500 - 3,749	751,597	320,956	545,846	1,618,399	3,145	3,147	3,192	3,161
COSTS $		29,262,246	12,952,326	11,984,078	54,198,650	122,436	126,984	70,082	105,857
WELLS		183	72	187	442				
FOOTAGE	3,750 - 4,999	804,434	316,189	820,348	1,940,971	4,396	4,392	4,387	4,391
COSTS $		30,897,911	12,495,928	19,479,953	62,873,792	168,841	173,555	104,171	142,248
WELLS		264	200	258	722				
FOOTAGE	5,000 - 7,499	1,661,196	1,314,118	1,595,604	4,570,918	6,292	6,571	6,185	6,331
COSTS $		69,426,899	58,768,948	43,350,496	171,546,343	262,981	293,845	168,025	237,599
WELLS		254	220	127	601				
FOOTAGE	7,500 - 9,999	2,233,204	1,869,880	1,086,804	5,189,888	8,792	8,499	8,558	8,635
COSTS $		110,801,406	95,985,569	36,055,511	242,842,486	436,226	436,298	283,902	404,064
WELLS		75	91	50	216				
FOOTAGE	10,000 - 12,499	807,234	1,029,614	551,350	2,388,198	10,763	11,314	11,027	11,056
COSTS $		52,376,900	71,940,432	26,690,367	151,007,719	698,359	790,554	533,808	699,110
WELLS		10	49	28	87				
FOOTAGE	12,500 - 14,999	136,612	646,930	376,377	1,159,919	13,661	13,203	13,442	13,332
COSTS $		14,945,964	60,954,989	29,480,124	105,381,077	1,494,596	1,243,979	1,052,862	1,211,277
WELLS		3	22	11	36				
FOOTAGE	15,000 - 17,499	47,535	360,555	175,130	583,220	15,845	16,389	15,921	16,201
COSTS $		5,355,476	49,531,616	21,864,943	76,752,035	1,785,159	2,251,437	1,987,722	2,132,001
WELLS		--	18	11	29				
FOOTAGE	17,500 - 19,999	--	325,438	199,598	525,036	--	18,080	18,145	18,105
COSTS $		--	52,432,829	28,655,686	81,088,515	--	2,912,935	2,605,062	2,796,156
WELLS		--	1	--	1				
FOOTAGE	20,000 & OVER	--	20,900	--	20,900	--	20,900	--	20,900
COSTS $		--	7,455,388	--	7,455,388	--	7,455,388	--	7,455,388
TOTAL WELLS		1,580	968	1,049	3,597				
TOTAL FOOTAGE		7,277,617	6,503,162	5,693,218	19,473,997	4,606	6,718	5,427	5,414
TOTAL COSTS $		342,026,614	433,318,393	224,297,088	999,642,095	216,473	447,643	213,820	277,910

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS - TOTAL

Table 35

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		580	68	415	1,063				
FOOTAGE	0 - 1,249	428,167	51,044	311,151	790,362	738	751	750	744
COSTS $		10,355,673	1,754,177	5,327,671	17,437,521	17,855	25,797	12,838	16,404
WELLS		752	70	555	1,377				
FOOTAGE	1,250 - 2,499	1,342,356	130,199	1,027,889	2,500,444	1,785	1,860	1,852	1,816
COSTS $		44,807,672	4,755,954	19,968,240	69,531,866	59,585	67,942	35,979	50,495
WELLS		764	152	448	1,364				
FOOTAGE	2,500 - 3,749	2,357,425	487,546	1,405,879	4,250,860	3,086	3,208	3,138	3,116
COSTS $		90,770,887	19,530,077	30,639,518	140,940,482	118,810	128,487	68,392	103,329
WELLS		1,059	176	571	1,806				
FOOTAGE	3,750 - 4,999	4,772,708	754,078	2,487,560	8,014,346	4,507	4,285	4,356	4,438
COSTS $		164,186,029	26,447,833	54,998,975	245,632,837	155,039	150,272	96,320	136,009
WELLS		1,259	331	808	2,398				
FOOTAGE	5,000 - 7,499	7,595,966	2,070,107	4,908,381	14,574,454	6,033	6,254	6,075	6,078
COSTS $		314,847,901	88,647,256	129,700,370	533,195,527	250,078	267,816	160,520	222,350
WELLS		833	383	498	1,714				
FOOTAGE	7,500 - 9,999	7,355,565	3,383,942	4,276,977	15,016,484	8,830	8,835	8,588	8,761
COSTS $		366,394,721	229,908,346	164,808,495	761,111,562	439,850	600,283	330,941	444,056
WELLS		162	284	214	660				
FOOTAGE	10,000 - 12,499	1,767,738	3,108,103	2,339,486	7,215,327	10,912	10,944	10,932	10,932
COSTS $		131,546,603	312,750,249	129,474,211	573,771,063	812,016	1,101,233	605,020	869,350
WELLS		18	94	72	184				
FOOTAGE	12,500 - 14,999	235,533	1,269,014	967,885	2,472,432	13,085	13,500	13,443	13,437
COSTS $		16,272,656	189,250,685	128,797,709	334,321,050	904,036	2,013,305	1,788,857	1,816,962
WELLS		1	25	17	43				
FOOTAGE	15,000 - 17,499	16,053	391,035	268,009	675,097	16,053	15,641	15,765	15,700
COSTS $		1,984,166	79,777,671	56,367,250	138,129,087	1,984,166	3,191,107	3,315,721	3,212,304
WELLS		1	3	5	9				
FOOTAGE	17,500 - 19,999	18,700	54,795	92,718	166,213	18,700	18,265	18,544	18,468
COSTS $		1,418,667	18,026,426	25,231,887	44,676,980	1,418,667	6,008,809	5,046,378	4,964,109
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	21,700	21,700	--	--	21,700	21,700
COSTS $		--	--	4,233,758	4,233,758	--	--	4,233,758	4,233,758
TOTAL WELLS		5,429	1,586	3,604	10,619				
TOTAL FOOTAGE		25,890,211	11,699,863	18,107,635	55,697,709	4,769	7,377	5,024	5,245
TOTAL COSTS $		1,142,584,975	970,848,674	749,548,084	2,862,981,733	210,460	612,137	207,977	269,609

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 1

Table 36

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		225	4	45	274				
FOOTAGE	0 - 1,249	145,056	4,641	33,765	183,462	645	1,160	750	670
COSTS $		2,104,870	151,386	448,765	2,705,021	9,355	37,847	9,973	9,872
WELLS		163	4	97	264				
FOOTAGE	1,250 - 2,499	289,493	6,150	181,757	477,400	1,776	1,538	1,874	1,808
COSTS $		7,912,960	181,939	3,455,604	11,550,503	48,546	45,485	35,625	43,752
WELLS		91	4	48	143				
FOOTAGE	2,500 - 3,749	248,796	11,487	141,649	401,932	2,734	2,872	2,951	2,811
COSTS $		8,013,409	486,467	2,860,131	11,360,007	88,059	121,617	59,586	79,441
WELLS		12	9	22	43				
FOOTAGE	3,750 - 4,999	54,065	39,248	93,294	186,607	4,505	4,361	4,241	4,340
COSTS $		1,854,276	1,928,987	1,888,327	5,671,590	154,523	214,332	85,833	131,897
WELLS		134	15	59	208				
FOOTAGE	5,000 - 7,499	760,364	95,418	358,094	1,213,876	5,674	6,361	6,069	5,836
COSTS $		26,048,557	3,962,701	7,862,564	37,873,822	194,392	264,180	133,264	182,086
WELLS		43	7	11	61				
FOOTAGE	7,500 - 9,999	398,668	64,376	95,417	558,461	9,271	9,197	8,674	9,155
COSTS $		15,427,706	2,975,847	2,495,553	20,899,106	358,784	425,121	226,868	342,608
WELLS		11	6	2	19				
FOOTAGE	10,000 - 12,499	113,698	64,996	21,600	200,294	10,336	10,833	10,800	10,542
COSTS $		4,163,113	4,703,089	589,970	9,456,172	378,465	783,848	294,985	497,693
WELLS		--	2	--	2				
FOOTAGE	12,500 - 14,999	--	26,160	--	26,160	--	13,080	--	13,080
COSTS $		--	1,331,673	--	1,331,673	--	665,837	--	665,837
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		679	51	284	1,014				
TOTAL FOOTAGE		2,010,140	312,476	925,576	3,248,192	2,960	6,127	3,259	3,203
TOTAL COSTS $		65,524,891	15,722,089	19,600,914	100,847,894	96,502	308,276	69,017	99,456

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 2

Table 37

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		6	1	10	17				
FOOTAGE	0 - 1,249	6,550	1,164	10,744	18,458	1,092	1,164	1,074	1,086
COSTS $		172,810	29,231	148,413	350,454	28,802	29,231	14,841	20,615
WELLS		1	10	12	23				
FOOTAGE	1,250 - 2,499	2,286	21,110	24,101	47,497	2,286	2,111	2,008	2,065
COSTS $		62,241	548,263	339,710	950,214	62,241	54,826	28,309	41,314
WELLS		14	17	26	57				
FOOTAGE	2,500 - 3,749	45,204	50,917	81,741	177,862	3,229	2,995	3,144	3,120
COSTS $		1,288,610	1,571,328	1,210,577	4,070,515	92,044	92,431	46,561	71,413
WELLS		14	26	43	83				
FOOTAGE	3,750 - 4,999	60,449	110,199	184,331	354,979	4,318	4,238	4,287	4,277
COSTS $		1,815,974	3,163,038	3,217,822	8,196,834	129,712	121,655	74,833	98,757
WELLS		30	42	63	135				
FOOTAGE	5,000 - 7,499	178,383	249,651	375,569	803,603	5,946	5,944	5,961	5,953
COSTS $		6,351,105	9,162,229	7,713,198	23,226,532	211,704	218,148	122,432	172,048
WELLS		11	25	39	75				
FOOTAGE	7,500 - 9,999	94,350	215,478	333,398	643,226	8,577	8,619	8,549	8,576
COSTS $		4,242,668	12,176,475	10,086,760	26,505,903	385,697	487,059	258,635	353,412
WELLS		5	14	15	34				
FOOTAGE	10,000 - 12,499	55,498	149,661	166,780	371,939	11,100	10,690	11,119	10,939
COSTS $		3,833,675	10,091,059	8,319,308	22,244,042	766,735	720,790	554,621	654,237
WELLS		--	11	10	21				
FOOTAGE	12,500 - 14,999	--	145,288	136,127	281,415	--	13,208	13,613	13,401
COSTS $		--	19,538,624	12,343,435	31,882,059	--	1,776,239	1,234,344	1,518,193
WELLS		--	6	2	8				
FOOTAGE	15,000 - 17,499	--	93,673	30,734	124,407	--	15,612	15,367	15,551
COSTS $		--	29,162,379	3,873,300	33,035,679	--	4,860,397	1,936,650	4,129,460
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		81	152	220	453				
TOTAL FOOTAGE		442,720	1,037,141	1,343,525	2,823,386	5,466	6,823	6,107	6,233
TOTAL COSTS $		17,767,083	85,442,626	47,252,523	150,462,232	219,347	562,123	214,784	332,146

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 3

Table 38

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		27	8	16	51				
FOOTAGE	0 - 1,249	19,381	4,095	8,714	32,190	718	512	545	631
COSTS $		1,916,708	223,116	551,602	2,691,426	70,989	27,890	34,475	52,773
WELLS		19	5	12	36				
FOOTAGE	1,250 - 2,499	37,166	9,609	24,808	71,583	1,956	1,922	2,067	1,988
COSTS $		2,110,829	349,363	675,387	3,135,579	111,096	69,873	56,282	87,099
WELLS		18	5	25	48				
FOOTAGE	2,500 - 3,749	59,517	14,585	80,719	154,821	3,307	2,917	3,229	3,225
COSTS $		2,788,706	538,843	1,784,135	5,111,684	154,928	107,769	71,365	106,493
WELLS		27	10	17	54				
FOOTAGE	3,750 - 4,999	115,660	45,731	75,061	236,452	4,284	4,573	4,415	4,379
COSTS $		5,808,938	1,480,471	1,545,224	8,834,633	215,146	148,047	90,896	163,604
WELLS		194	17	67	278				
FOOTAGE	5,000 - 7,499	1,130,043	110,491	413,320	1,653,854	5,825	6,499	6,169	5,949
COSTS $		63,932,701	4,289,797	11,255,817	79,478,315	329,550	252,341	167,997	285,893
WELLS		104	32	90	226				
FOOTAGE	7,500 - 9,999	887,553	282,215	782,097	1,951,865	8,534	8,819	8,690	8,637
COSTS $		56,617,621	16,400,093	25,645,101	98,662,815	544,400	512,503	284,946	436,561
WELLS		14	45	53	112				
FOOTAGE	10,000 - 12,499	151,533	503,903	572,239	1,227,675	10,824	11,198	10,797	10,961
COSTS $		15,850,704	42,971,338	30,828,022	89,650,064	1,132,193	954,919	581,661	800,447
WELLS		1	14	19	34				
FOOTAGE	12,500 - 14,999	12,671	183,563	255,149	451,383	12,671	13,112	13,429	13,276
COSTS $		1,952,209	20,455,479	24,687,012	47,094,700	1,952,209	1,461,106	1,299,316	1,385,138
WELLS		--	2	4	6				
FOOTAGE	15,000 - 17,499	--	33,026	64,063	97,089	--	16,513	16,016	16,182
COSTS $		--	5,512,206	13,289,688	18,801,894	--	2,756,103	3,322,422	3,133,649
WELLS		--	1	3	4				
FOOTAGE	17,500 - 19,999	--	18,000	55,101	73,101	--	18,000	18,367	18,275
COSTS $		--	3,158,871	11,992,462	15,151,333	--	3,158,871	3,997,487	3,787,833
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		404	139	306	849				
TOTAL FOOTAGE		2,413,524	1,205,218	2,331,271	5,950,013	5,974	8,671	7,619	7,008
TOTAL COSTS $		150,978,416	95,379,577	122,254,450	368,612,443	373,709	686,184	399,524	434,173

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 39

TEXAS RRC DIST. 4

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	4	8	12				
FOOTAGE	0 - 1,249	--	3,158	7,390	10,548	--	790	924	879
COSTS $		--	164,640	310,991	475,631	--	41,160	38,874	39,636
WELLS		12	9	19	40				
FOOTAGE	1,250 - 2,499	25,592	16,986	34,326	76,904	2,133	1,887	1,807	1,923
COSTS $		1,176,969	614,332	1,110,166	2,901,467	98,081	68,259	58,430	72,537
WELLS		14	8	23	45				
FOOTAGE	2,500 - 3,749	44,612	26,764	70,012	141,388	3,187	3,346	3,044	3,142
COSTS $		1,521,635	944,180	1,599,282	4,065,097	108,688	118,023	69,534	90,335
WELLS		14	10	31	55				
FOOTAGE	3,750 - 4,999	60,831	45,613	140,807	247,251	4,345	4,561	4,542	4,495
COSTS $		1,573,605	1,927,829	4,412,406	7,913,840	112,400	192,783	142,336	143,888
WELLS		27	66	94	187				
FOOTAGE	5,000 - 7,499	170,425	417,203	602,901	1,190,529	6,312	6,321	6,414	6,366
COSTS $		5,484,569	17,781,616	17,956,769	41,222,954	203,132	269,418	191,029	220,444
WELLS		15	147	65	227				
FOOTAGE	7,500 - 9,999	120,991	1,303,111	563,404	1,987,506	8,066	8,865	8,668	8,756
COSTS $		4,442,635	97,924,854	27,090,235	129,457,724	296,176	666,156	416,773	570,298
WELLS		3	114	41	158				
FOOTAGE	10,000 - 12,499	33,004	1,237,670	443,219	1,713,893	11,001	10,857	10,810	10,847
COSTS $		2,141,134	133,216,373	30,568,227	165,925,734	713,711	1,168,565	745,567	1,050,163
WELLS		--	36	5	41				
FOOTAGE	12,500 - 14,999	--	503,164	69,926	573,090	--	13,977	13,985	13,978
COSTS $		--	81,670,300	7,653,985	89,324,285	--	2,268,620	1,530,797	2,178,641
WELLS		--	10	4	14				
FOOTAGE	15,000 - 17,499	--	157,011	63,606	220,617	--	15,701	15,902	15,758
COSTS $		--	27,122,067	11,415,563	38,537,630	--	2,712,207	2,853,891	2,752,688
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		85	404	290	779				
TOTAL FOOTAGE		455,455	3,710,680	1,995,591	6,161,726	5,358	9,185	6,881	7,910
TOTAL COSTS $		16,340,547	361,366,191	102,117,624	479,824,362	192,242	894,471	352,130	615,949

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 5

Table 40

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		36	1	33	70				
FOOTAGE	0 - 1,249	29,540	945	26,965	57,450	821	945	817	821
COSTS $		614,044	39,718	417,341	1,071,103	17,057	39,718	12,647	15,301
WELLS		4	1	19	24				
FOOTAGE	1,250 - 2,499	8,834	2,056	33,636	44,526	2,209	2,056	1,770	1,855
COSTS $		584,416	59,556	581,575	1,225,547	146,104	59,556	30,609	51,064
WELLS		13	--	17	30				
FOOTAGE	2,500 - 3,749	40,997	--	55,477	96,474	3,154	--	3,263	3,216
COSTS $		1,675,277	--	958,849	2,634,126	128,867	--	56,403	87,804
WELLS		2	--	18	20				
FOOTAGE	3,750 - 4,999	7,888	--	74,418	82,306	3,944	--	4,134	4,115
COSTS $		214,701	--	1,536,605	1,751,306	107,351	--	85,367	87,565
WELLS		6	2	7	15				
FOOTAGE	5,000 - 7,499	36,972	13,605	43,733	94,310	6,162	6,803	6,248	6,287
COSTS $		1,401,033	768,050	1,183,296	3,352,379	233,506	384,025	169,042	223,492
WELLS		81	12	15	108				
FOOTAGE	7,500 - 9,999	771,354	115,948	132,312	1,019,614	9,523	9,662	8,821	9,441
COSTS $		34,883,852	7,486,917	5,585,279	47,956,048	430,665	623,910	372,352	444,037
WELLS		9	36	6	51				
FOOTAGE	10,000 - 12,499	93,134	388,629	65,631	547,394	10,348	10,795	10,939	10,733
COSTS $		5,034,517	33,560,422	4,707,135	43,302,074	559,391	932,234	784,523	849,060
WELLS		--	5	3	8				
FOOTAGE	12,500 - 14,999	--	67,107	39,877	106,984	--	13,421	13,292	13,373
COSTS $		--	7,966,032	4,191,734	12,157,766	--	1,593,206	1,397,245	1,519,721
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	--	1				
FOOTAGE	17,500 - 19,999	--	17,741	--	17,741	--	17,741	--	17,741
COSTS $		--	7,245,955	--	7,245,955	--	7,245,955	--	7,245,955
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		151	58	118	327				
TOTAL FOOTAGE		988,719	606,031	472,049	2,066,799	6,548	10,449	4,000	6,320
TOTAL COSTS $		44,407,840	57,126,650	19,161,814	120,696,304	294,092	984,942	162,388	369,102

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 6

Table 41

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		15	1	11	27				
FOOTAGE	0 - 1,249	7,937	995	6,257	15,189	529	995	569	563
COSTS $		183,029	24,603	189,931	397,563	12,202	24,603	17,266	14,725
WELLS		31	2	15	48				
FOOTAGE	1,250 - 2,499	56,740	3,882	28,991	89,613	1,830	1,941	1,933	1,867
COSTS $		2,300,400	97,276	678,161	3,075,837	74,206	48,638	45,211	64,080
WELLS		5	3	1	9				
FOOTAGE	2,500 - 3,749	17,233	8,100	3,600	28,933	3,447	2,700	3,600	3,215
COSTS $		660,834	249,599	87,660	998,093	132,167	83,200	87,660	110,899
WELLS		41	--	25	66				
FOOTAGE	3,750 - 4,999	190,084	--	113,376	303,460	4,636	--	4,535	4,598
COSTS $		8,417,728	--	3,201,551	11,619,279	205,310	--	128,062	176,050
WELLS		57	58	98	213				
FOOTAGE	5,000 - 7,499	355,831	380,905	622,299	1,359,035	6,243	6,567	6,350	6,380
COSTS $		16,995,357	19,390,717	17,010,723	53,396,797	298,164	334,323	173,579	250,689
WELLS		31	70	41	142				
FOOTAGE	7,500 - 9,999	254,034	614,410	344,170	1,212,614	8,195	8,777	8,394	8,540
COSTS $		12,758,553	42,243,132	10,522,740	65,524,425	411,566	603,473	256,652	461,440
WELLS		4	37	17	58				
FOOTAGE	10,000 - 12,499	43,766	408,051	181,413	633,230	10,942	11,028	10,671	10,918
COSTS $		3,317,573	36,425,965	8,441,186	48,184,724	829,393	984,486	496,540	830,771
WELLS		--	4	2	6				
FOOTAGE	12,500 - 14,999	--	53,354	27,134	80,488	--	13,339	13,567	13,415
COSTS $		--	6,761,145	2,278,182	9,039,327	--	1,690,286	1,139,091	1,506,555
WELLS		--	--	2	2				
FOOTAGE	15,000 - 17,499	--	--	31,450	31,450	--	--	15,725	15,725
COSTS $		--	--	9,254,374	9,254,374	--	--	4,627,187	4,627,187
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		184	175	212	571				
TOTAL FOOTAGE		925,625	1,469,697	1,358,690	3,754,012	5,031	8,398	6,409	6,574
TOTAL COSTS $		44,633,474	105,192,437	51,664,508	201,490,419	242,573	601,100	243,701	352,873

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 7B

Table 42

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		83	42	137	262				
FOOTAGE	0 - 1,249	63,062	31,665	91,389	186,116	760	754	667	710
COSTS $		1,059,135	1,018,848	1,267,776	3,345,759	12,761	24,258	9,254	12,770
WELLS		159	30	144	333				
FOOTAGE	1,250 - 2,499	278,369	54,267	268,746	601,382	1,751	1,809	1,866	1,806
COSTS $		6,439,589	2,026,545	4,343,409	12,809,543	40,501	67,552	30,163	38,467
WELLS		146	86	151	383				
FOOTAGE	2,500 - 3,749	453,801	280,170	482,405	1,216,376	3,108	3,258	3,195	3,176
COSTS $		12,814,597	11,328,463	8,488,087	32,631,147	87,771	131,726	56,212	85,199
WELLS		221	80	179	480				
FOOTAGE	3,750 - 4,999	947,135	333,231	776,849	2,057,215	4,286	4,165	4,340	4,286
COSTS $		27,085,859	12,453,067	13,759,633	53,298,559	122,560	155,663	76,869	111,039
WELLS		81	9	132	222				
FOOTAGE	5,000 - 7,499	467,556	50,965	772,055	1,290,576	5,772	5,663	5,849	5,813
COSTS $		13,920,153	1,844,417	14,237,416	30,001,986	171,854	204,935	107,859	135,144
WELLS		--	--	--	--				
FOOTAGE	7,500 - 9,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		690	247	743	1,680				
TOTAL FOOTAGE		2,209,923	750,298	2,391,444	5,351,665	3,203	3,038	3,219	3,186
TOTAL COSTS $		61,319,333	28,671,340	42,096,321	132,086,994	88,869	116,078	56,657	78,623

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 7C

Table 43

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		25	1	15	41				
FOOTAGE	0 - 1,249	23,490	928	12,671	37,089	940	928	845	905
COSTS $		1,115,105	53,340	376,636	1,545,081	44,604	53,340	25,109	37,685
WELLS		31	6	28	65				
FOOTAGE	1,250 - 2,499	56,826	9,979	52,515	119,320	1,833	1,663	1,876	1,836
COSTS $		3,083,826	615,096	1,654,092	5,353,014	99,478	102,516	59,075	82,354
WELLS		70	4	28	102				
FOOTAGE	2,500 - 3,749	208,022	12,941	90,668	311,631	2,972	3,235	3,238	3,055
COSTS $		10,213,250	593,826	2,550,331	13,357,407	145,904	148,457	91,083	130,955
WELLS		49	18	46	113				
FOOTAGE	3,750 - 4,999	210,011	76,752	200,429	487,192	4,286	4,264	4,357	4,311
COSTS $		7,538,414	2,875,454	4,802,094	15,215,962	153,845	159,747	104,393	134,655
WELLS		66	65	51	182				
FOOTAGE	5,000 - 7,499	414,535	405,287	309,242	1,129,064	6,281	6,235	6,064	6,204
COSTS $		18,648,553	13,819,241	8,505,061	40,972,855	282,554	212,604	166,766	225,126
WELLS		96	44	17	157				
FOOTAGE	7,500 - 9,999	812,240	383,036	147,821	1,343,097	8,461	8,705	8,695	8,555
COSTS $		38,774,524	14,403,616	4,243,134	57,421,274	403,901	327,355	249,596	365,741
WELLS		19	1	4	24				
FOOTAGE	10,000 - 12,499	204,653	11,625	42,379	258,657	10,771	11,625	10,595	10,777
COSTS $		11,712,974	640,610	1,567,533	13,921,117	616,472	640,610	391,883	580,047
WELLS		1	--	1	2				
FOOTAGE	12,500 - 14,999	13,460	--	12,815	26,275	13,460	--	12,815	13,138
COSTS $		1,036,744	--	1,186,074	2,222,818	1,036,744	--	1,186,074	1,111,409
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		1	--	--	1				
FOOTAGE	17,500 - 19,999	18,700	--	--	18,700	18,700	--	--	18,700
COSTS $		1,418,667	--	--	1,418,667	1,418,667	--	--	1,418,667
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		358	139	190	687				
TOTAL FOOTAGE		1,961,937	900,548	868,540	3,731,025	5,480	6,479	4,571	5,431
TOTAL COSTS $		93,542,057	33,001,183	24,884,955	151,428,195	261,291	237,419	130,973	220,420

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 8

Table 44

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		5	--	7	12				
FOOTAGE	0 - 1,249	4,745	--	2,896	7,641	949	--	414	637
COSTS $		781,651	--	705,334	1,486,985	156,330	--	100,762	123,915
WELLS		77	--	15	92				
FOOTAGE	1,250 - 2,499	129,883	--	29,916	159,799	1,687	--	1,994	1,737
COSTS $		11,107,312	--	2,196,150	13,303,462	144,251	--	146,410	144,603
WELLS		162	6	28	196				
FOOTAGE	2,500 - 3,749	496,954	18,360	90,185	606,099	3,068	3,160	3,221	3,092
COSTS $		24,760,057	834,985	4,223,770	29,818,812	152,840	139,164	150,849	152,137
WELLS		283	1	36	320				
FOOTAGE	3,750 - 4,999	1,295,352	4,075	158,959	1,458,386	4,577	4,075	4,416	4,557
COSTS $		54,659,584	151,206	5,403,180	60,213,970	193,143	151,206	150,088	188,169
WELLS		151	4	28	183				
FOOTAGE	5,000 - 7,499	925,711	23,090	168,295	1,117,096	6,131	5,773	6,011	6,104
COSTS $		41,350,954	1,110,968	6,200,902	48,662,824	273,847	277,742	221,461	265,917
WELLS		345	6	51	402				
FOOTAGE	7,500 - 9,999	3,123,497	49,375	429,316	3,602,188	9,054	8,229	8,418	8,961
COSTS $		158,046,120	3,474,676	16,306,913	177,827,709	458,105	579,113	319,743	442,358
WELLS		66	2	25	93				
FOOTAGE	10,000 - 12,499	722,795	22,490	272,112	1,017,397	10,951	11,245	10,884	10,940
COSTS $		46,151,322	3,433,599	11,898,714	61,483,635	699,262	1,716,800	475,949	661,114
WELLS		10	--	4	14				
FOOTAGE	12,500 - 14,999	131,856	--	54,880	186,736	13,186	--	13,720	13,338
COSTS $		8,333,006	--	2,814,507	11,147,513	833,301	--	703,627	796,251
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	1	1	2				
FOOTAGE	17,500 - 19,999	--	19,054	19,117	38,171	--	19,054	19,117	19,086
COSTS $		--	7,621,600	5,011,538	12,633,138	--	7,621,600	5,011,538	6,316,569
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	21,700	21,700	--	--	21,700	21,700
COSTS $		--	--	4,233,758	4,233,758	--	--	4,233,758	4,233,758
TOTAL WELLS		1,099	20	196	1,315				
TOTAL FOOTAGE		6,830,793	137,044	1,247,376	8,215,213	6,215	6,852	6,364	6,247
TOTAL COSTS $		345,190,006	16,627,034	58,994,766	420,811,806	314,095	831,352	300,994	320,009

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 8A

Table 45

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	--	--	4	4				
FOOTAGE		--	--	1,963	1,963	--	--	491	491
COSTS $		--	--	30,310	30,310	--	--	7,578	7,578
WELLS	1,250 - 2,499	7	--	1	8				
FOOTAGE		12,682	--	1,898	14,580	1,812	--	1,898	1,823
COSTS $		431,345	--	39,362	470,707	61,621	--	39,362	58,838
WELLS	2,500 - 3,749	52	--	27	79				
FOOTAGE		169,031	--	87,808	256,839	3,251	--	3,252	3,251
COSTS $		5,937,554	--	2,008,116	7,945,670	114,184	--	74,375	100,578
WELLS	3,750 - 4,999	228	--	59	287				
FOOTAGE		1,085,790	--	249,398	1,335,188	4,762	--	4,227	4,652
COSTS $		33,865,845	--	5,956,520	39,822,365	148,534	--	100,958	138,754
WELLS	5,000 - 7,499	368	--	73	441				
FOOTAGE		2,307,637	--	436,482	2,744,119	6,271	--	5,979	6,222
COSTS $		92,345,768	--	11,545,673	103,891,441	250,940	--	158,160	235,582
WELLS	7,500 - 9,999	78	--	62	140				
FOOTAGE		642,671	--	528,612	1,171,283	8,239	--	8,526	8,366
COSTS $		30,816,080	--	17,334,028	48,150,108	395,078	--	279,581	343,929
WELLS	10,000 - 12,499	18	--	20	38				
FOOTAGE		205,758	--	227,608	433,366	11,431	--	11,380	11,404
COSTS $		11,782,974	--	9,185,126	20,968,100	654,610	--	459,256	551,792
WELLS	12,500 - 14,999	5	--	11	16				
FOOTAGE		64,946	--	145,491	210,437	12,989	--	13,226	13,152
COSTS $		4,192,752	--	5,932,153	10,124,905	838,550	--	539,287	632,807
WELLS	15,000 - 17,499	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		756	--	257	1,013				
TOTAL FOOTAGE		4,488,515	--	1,679,260	6,167,775	5,937	--	6,534	6,089
TOTAL COSTS $		179,372,318	--	52,031,288	231,403,606	237,265	--	202,456	228,434

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 9

Table 46

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		158	6	128	292				
FOOTAGE	0 - 1,249	128,406	3,453	107,997	239,856	813	576	844	821
COSTS $		2,408,321	49,295	877,307	3,334,923	15,243	8,216	6,854	11,421
WELLS		232	1	187	420				
FOOTAGE	1,250 - 2,499	408,149	1,960	335,595	745,704	1,759	1,960	1,795	1,775
COSTS $		8,404,365	15,784	4,679,841	13,099,990	36,226	15,784	25,026	31,190
WELLS		42	--	62	104				
FOOTAGE	2,500 - 3,749	125,564	--	182,824	308,388	2,990	--	2,949	2,965
COSTS $		3,124,329	--	2,688,715	5,813,044	74,389	--	43,366	55,895
WELLS		141	21	87	249				
FOOTAGE	3,750 - 4,999	638,607	95,429	386,903	1,120,939	4,529	4,544	4,447	4,502
COSTS $		16,216,094	2,304,608	6,568,550	25,089,252	115,008	109,743	75,501	100,760
WELLS		121	34	107	262				
FOOTAGE	5,000 - 7,499	692,395	200,059	617,860	1,510,314	5,722	5,884	5,774	5,765
COSTS $		21,980,549	8,771,900	11,736,120	42,488,569	181,657	257,997	109,683	162,170
WELLS		17	5	57	79				
FOOTAGE	7,500 - 9,999	142,119	40,347	482,290	664,756	8,360	8,069	8,461	8,415
COSTS $		5,106,812	1,901,775	11,276,187	18,284,774	300,401	380,355	197,828	231,453
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	12,500 - 14,999	--	--	14,000	14,000	--	--	14,000	14,000
COSTS $		--	--	1,364,858	1,364,858	--	--	1,364,858	1,364,858
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		711	67	629	1,407				
TOTAL FOOTAGE		2,135,240	341,248	2,127,469	4,603,957	3,003	5,093	3,382	3,272
TOTAL COSTS $		57,240,470	13,043,362	39,191,578	109,475,410	80,507	194,677	62,308	77,808

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS RRC DIST. 10

Table 47

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	1	1				
FOOTAGE	0 - 1,249	--	--	400	400	--	--	400	400
COSTS $		--	--	3,265	3,265	--	--	3,265	3,265
WELLS		16	2	6	24				
FOOTAGE	1,250 - 2,499	36,336	4,200	11,600	52,136	2,271	2,100	1,933	2,172
COSTS $		1,193,420	247,800	214,783	1,656,003	74,589	123,900	35,797	69,000
WELLS		137	19	11	167				
FOOTAGE	2,500 - 3,749	447,694	63,622	36,060	547,376	3,268	3,349	3,278	3,278
COSTS $		17,972,629	2,982,386	1,238,619	22,193,634	131,187	156,968	112,602	132,896
WELLS		27	1	6	34				
FOOTAGE	3,750 - 4,999	106,836	3,800	24,877	135,513	3,957	3,800	4,146	3,986
COSTS $		5,135,011	163,173	866,023	6,164,207	190,186	163,173	144,337	181,300
WELLS		24	15	17	56				
FOOTAGE	5,000 - 7,499	156,114	96,578	115,205	367,897	6,505	6,439	6,777	6,570
COSTS $		6,388,602	3,400,350	3,528,435	13,317,387	266,192	226,690	207,555	237,810
WELLS		11	24	33	68				
FOOTAGE	7,500 - 9,999	98,433	217,272	284,579	600,284	8,948	9,053	8,624	8,828
COSTS $		4,260,724	9,530,264	7,391,340	21,182,328	387,339	397,094	223,980	311,505
WELLS		8	18	25	51				
FOOTAGE	10,000 - 12,499	87,626	199,338	276,753	563,717	10,953	11,074	11,070	11,053
COSTS $		4,419,945	10,975,829	8,449,575	23,845,349	552,493	609,768	337,983	467,556
WELLS		1	17	1	19				
FOOTAGE	12,500 - 14,999	12,600	222,644	12,800	248,044	12,600	13,097	12,800	13,055
COSTS $		757,945	15,947,489	551,986	17,257,420	757,945	938,088	551,986	908,285
WELLS		--	5	1	6				
FOOTAGE	15,000 - 17,499	--	75,481	16,166	91,647	--	15,096	16,166	15,275
COSTS $		--	7,214,940	2,128,169	9,343,109	--	1,442,988	2,128,169	1,557,185
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		224	101	101	426				
TOTAL FOOTAGE		945,639	882,935	778,440	2,607,014	4,222	8,742	7,707	6,120
TOTAL COSTS $		40,128,276	50,462,231	24,372,195	114,962,702	179,144	499,626	241,309	269,866

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

TEXAS - OFFSHORE

Table 48

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	1,250 - 2,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	2,500 - 3,749	--	--	2,731	2,731	--	--	2,731	2,731
COSTS $		--	--	941,246	941,246	--	--	941,246	941,246
WELLS		--	--	2	2				
FOOTAGE	3,750 - 4,999	--	--	8,858	8,858	--	--	4,429	4,429
COSTS $		--	--	1,841,040	1,841,040	--	--	920,520	920,520
WELLS		--	4	12	16				
FOOTAGE	5,000 - 7,499	--	26,855	73,326	100,181	--	6,714	6,111	6,261
COSTS $		--	4,345,270	10,964,396	15,309,666	--	1,086,318	913,700	956,854
WELLS		1	11	17	29				
FOOTAGE	7,500 - 9,999	9,655	98,374	153,561	261,590	9,655	8,943	9,033	9,020
COSTS $		1,017,426	21,390,697	26,831,225	49,239,348	1,017,426	1,944,609	1,578,307	1,697,909
WELLS		5	11	6	22				
FOOTAGE	10,000 - 12,499	56,273	121,740	69,752	247,765	11,255	11,067	11,625	11,262
COSTS $		23,138,672	36,731,965	14,919,415	74,790,052	4,627,735	3,339,270	2,486,569	3,399,548
WELLS		--	5	15	20				
FOOTAGE	12,500 - 14,999	--	67,734	199,686	267,420	--	13,547	13,312	13,371
COSTS $		--	35,579,943	65,793,783	101,373,726	--	7,115,989	4,386,252	5,068,687
WELLS		1	2	4	7				
FOOTAGE	15,000 - 17,499	16,053	31,844	61,990	109,887	16,053	15,922	15,498	15,698
COSTS $		1,984,166	10,766,079	16,406,156	29,156,401	1,984,166	5,383,040	4,101,539	4,165,200
WELLS		--	--	1	1				
FOOTAGE	17,500 - 19,999	--	--	18,500	18,500	--	--	18,500	18,500
COSTS $		--	--	8,227,887	8,227,887	--	--	8,227,887	8,227,887
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		7	33	58	98				
TOTAL FOOTAGE		81,981	346,547	588,404	1,016,932	11,712	10,501	10,145	10,377
TOTAL COSTS $		26,140,264	108,813,954	145,925,148	280,879,366	3,734,324	3,297,393	2,515,951	2,866,116

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 49

UTAH

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS	0 - 1,249	9	--	6	15				
FOOTAGE		2,582	--	3,468	6,050	287	--	578	403
COSTS $		137,976	--	949,721	1,087,697	15,331	--	158,287	72,513
WELLS	1,250 - 2,499	1	--	5	6				
FOOTAGE		1,277	--	9,772	11,049	1,277	--	1,954	1,842
COSTS $		68,703	--	1,473,271	1,541,974	68,703	--	294,654	256,996
WELLS	2,500 - 3,749	--	--	1	1				
FOOTAGE		--	--	2,728	2,728	--	--	2,728	2,728
COSTS $		--	--	203,151	203,151	--	--	203,151	203,151
WELLS	3,750 - 4,999	--	4	5	9				
FOOTAGE		--	17,236	21,257	38,493	--	4,309	4,251	4,277
COSTS $		--	839,887	673,047	1,512,934	--	209,972	134,609	168,104
WELLS	5,000 - 7,499	28	13	24	65				
FOOTAGE		173,349	87,577	146,822	407,748	6,191	6,737	6,118	6,273
COSTS $		9,959,756	5,559,178	5,463,491	20,982,425	355,706	427,629	227,645	322,807
WELLS	7,500 - 9,999	3	3	2	8				
FOOTAGE		26,179	25,551	17,008	68,738	8,726	8,517	8,504	8,592
COSTS $		3,170,635	1,451,128	862,921	5,484,684	1,056,878	483,709	431,461	685,586
WELLS	10,000 - 12,499	1	--	--	1				
FOOTAGE		10,824	--	--	10,824	10,824	--	--	10,824
COSTS $		1,875,060	--	--	1,875,060	1,875,060	--	--	1,875,060
WELLS	12,500 - 14,999	5	1	--	6				
FOOTAGE		69,755	14,635	--	84,390	13,951	14,635	--	14,065
COSTS $		7,944,511	3,840,847	--	11,785,358	1,588,902	3,840,847	--	1,964,226
WELLS	15,000 - 17,499	3	1	--	4				
FOOTAGE		45,090	15,649	--	60,739	15,030	15,649	--	15,185
COSTS $		6,000,237	7,344,547	--	13,344,784	2,000,079	7,344,547	--	3,336,196
WELLS	17,500 - 19,999	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS	20,000 & OVER	--	--	--	--				
FOOTAGE		--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		50	22	43	115				
TOTAL FOOTAGE		329,056	160,648	201,055	690,759	6,581	7,302	4,676	6,007
TOTAL COSTS $		29,156,878	19,035,587	9,625,602	57,818,067	583,138	865,254	223,851	502,766

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

WYOMING

Table 50

DEPTH INTERVAL (FEET)		TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		51	12	20	83				
FOOTAGE	0 - 1,249	42,595	8,068	14,059	64,722	835	672	703	780
COSTS $		2,482,063	313,511	747,055	3,542,629	48,668	26,126	37,353	42,682
WELLS		74	3	10	87				
FOOTAGE	1,250 - 2,499	136,675	5,818	20,211	162,704	1,847	1,939	2,021	1,870
COSTS $		6,814,236	367,978	1,193,217	8,375,431	92,084	122,659	119,322	96,269
WELLS		20	1	18	39				
FOOTAGE	2,500 - 3,749	62,932	2,780	57,108	122,820	3,147	2,780	3,173	3,149
COSTS $		3,478,186	175,805	3,527,229	7,181,220	173,909	175,805	195,957	184,134
WELLS		23	2	16	41				
FOOTAGE	3,750 - 4,999	98,411	8,769	70,180	177,360	4,279	4,385	4,386	4,326
COSTS $		6,140,348	611,710	2,955,139	9,707,197	266,972	305,855	184,696	236,761
WELLS		69	2	84	155				
FOOTAGE	5,000 - 7,499	442,720	13,997	563,945	1,020,662	6,416	6,999	6,714	6,585
COSTS $		25,162,522	976,685	13,752,252	39,891,459	364,674	488,343	163,717	257,364
WELLS		58	13	128	199				
FOOTAGE	7,500 - 9,999	497,693	116,714	1,101,855	1,716,262	8,581	8,978	8,608	8,624
COSTS $		20,193,795	8,313,619	25,686,864	54,194,278	348,169	639,509	200,679	272,333
WELLS		24	19	70	113				
FOOTAGE	10,000 - 12,499	260,156	209,157	758,427	1,227,740	10,840	11,008	10,835	10,865
COSTS $		13,715,190	12,903,461	24,777,253	51,395,904	571,466	679,130	353,961	454,831
WELLS		9	5	17	31				
FOOTAGE	12,500 - 14,999	120,217	66,762	239,182	426,161	13,357	13,352	14,070	13,747
COSTS $		15,010,527	5,597,348	16,090,267	36,698,142	1,667,836	1,119,470	946,486	1,183,811
WELLS		3	2	1	6				
FOOTAGE	15,000 - 17,499	46,349	31,337	15,200	92,886	15,450	15,669	15,200	15,481
COSTS $		6,885,110	3,493,238	2,966,549	13,344,897	2,295,037	1,746,619	2,966,549	2,224,150
WELLS		--	--	1	1				
FOOTAGE	17,500 - 19,999	--	--	17,810	17,810	--	--	17,810	17,810
COSTS $		--	--	7,870,246	7,870,246	--	--	7,870,246	7,870,246
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		331	59	365	755				
TOTAL FOOTAGE		1,707,748	463,402	2,857,977	5,029,127	5,159	7,854	7,830	6,661
TOTAL COSTS $		99,881,977	32,753,355	99,566,071	232,201,403	301,758	555,142	272,784	307,552

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

Table 51

APPALACHIAN *

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		48	40	38	126				
FOOTAGE	0 - 1,249	40,703	32,878	25,060	98,641	848	822	659	783
COSTS $		1,465,720	1,085,352	555,824	3,106,896	30,536	27,134	14,627	24,658
WELLS		180	308	18	506				
FOOTAGE	1,250 - 2,499	344,701	610,334	37,233	992,268	1,915	1,982	2,069	1,961
COSTS $		8,157,857	22,091,580	863,176	31,112,613	45,321	71,726	47,954	61,487
WELLS		378	558	51	987				
FOOTAGE	2,500 - 3,749	1,216,764	1,838,139	160,487	3,215,390	3,219	3,294	3,147	3,258
COSTS $		29,815,338	69,041,852	3,506,994	102,364,184	78,877	123,731	68,765	103,712
WELLS		447	588	48	1,083				
FOOTAGE	3,750 - 4,999	1,917,725	2,595,321	203,735	4,716,781	4,290	4,414	4,244	4,355
COSTS $		51,669,240	82,343,070	4,583,969	138,596,279	115,591	140,039	95,499	127,974
WELLS		218	699	22	939				
FOOTAGE	5,000 - 7,499	1,244,386	3,914,719	130,691	5,289,796	5,708	5,600	5,941	5,633
COSTS $		29,846,003	111,265,581	4,295,992	145,408,576	136,908	159,178	195,318	154,855
WELLS		3	15	--	18				
FOOTAGE	7,500 - 9,999	22,700	124,115	--	146,815	7,567	8,274	--	8,156
COSTS $		525,424	5,755,174	--	6,280,598	175,141	383,678	--	348,922
WELLS		--	--	--	--				
FOOTAGE	10,000 - 12,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	12,500 - 14,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	15,000 - 17,499	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	17,500 - 19,999	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	--	--				
FOOTAGE	20,000 & OVER	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
TOTAL WELLS		1,274	2,208	177	3,659				
TOTAL FOOTAGE		4,786,979	9,115,506	557,206	14,459,691	3,757	4,128	3,148	3,952
TOTAL COSTS $		121,479,582	291,582,609	13,806,955	426,869,146	95,353	132,057	78,005	116,663

* Includes New York, Ohio, Pennsylvania, and West Virginia.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

OFFSHORE FED - TOTAL *

Table 52

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	1,250 - 2,499	--	--	2,220	2,220	--	--	2,220	2,220
COSTS $		--	--	557,799	557,799	--	--	557,799	557,799
WELLS		--	1	5	6				
FOOTAGE	2,500 - 3,749	--	3,736	14,452	18,188	--	3,736	2,890	3,031
COSTS $		--	862,558	3,745,989	4,608,547	--	862,558	749,198	768,091
WELLS		--	--	5	5				
FOOTAGE	3,750 - 4,999	--	--	21,990	21,990	--	--	4,398	4,398
COSTS $		--	--	6,047,861	6,047,861	--	--	1,209,572	1,209,572
WELLS		1	--	4	5				
FOOTAGE	5,000 - 7,499	7,020	--	23,680	30,700	7,020	--	5,920	6,140
COSTS $		2,109,978	--	4,881,547	6,991,525	2,109,978	--	1,220,387	1,398,305
WELLS		4	2	12	18				
FOOTAGE	7,500 - 9,999	35,084	17,782	107,982	160,848	8,771	8,891	8,999	8,936
COSTS $		29,693,215	11,877,236	41,075,348	82,645,799	7,423,304	5,938,618	3,422,946	4,591,434
WELLS		11	--	5	16				
FOOTAGE	10,000 - 12,499	127,212	--	56,891	184,103	11,565	--	11,378	11,506
COSTS $		57,185,528	--	12,397,259	69,582,787	5,198,685	--	2,479,452	4,348,924
WELLS		8	--	10	18				
FOOTAGE	12,500 - 14,999	103,829	--	140,780	244,609	12,979	--	14,078	13,589
COSTS $		57,567,193	--	60,618,571	118,185,764	7,195,899	--	6,061,857	6,565,876
WELLS		1	1	2	4				
FOOTAGE	15,000 - 17,499	15,300	15,070	32,022	62,392	15,300	15,070	16,011	15,598
COSTS $		12,387,625	9,018,210	9,657,245	31,063,080	12,387,625	9,018,210	4,828,623	7,765,770
WELLS		--	--	4	4				
FOOTAGE	17,500 - 19,999	--	--	73,604	73,604	--	--	18,401	18,401
COSTS $		--	--	30,684,962	30,684,962	--	--	7,671,241	7,671,241
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	23,195	23,195	--	--	23,195	23,195
COSTS $		--	--	25,803,390	25,803,390	--	--	25,803,391	25,803,391
TOTAL WELLS		25	4	49	78				
TOTAL FOOTAGE		288,445	36,588	496,816	821,849	11,538	9,147	10,139	10,537
TOTAL COSTS $		158,943,539	21,758,004	195,469,971	376,171,514	6,357,742	5,439,501	3,989,183	4,822,712

* Includes Offshore Federal Waters-Alaska, and Offshore Federal Waters-Pacific Coast, which are not shown separately.

ESTIMATED COSTS OF DRILLING AND EQUIPPING WELLS, BY DEPTH INTERVALS - 1987

OFFSHORE FED. - GULF NORTH

Table 53

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		--	--	--	--				
FOOTAGE	0 - 1,249	--	--	--	--	--	--	--	--
COSTS $		--	--	--	--	--	--	--	--
WELLS		--	--	1	1				
FOOTAGE	1,250 - 2,499	--	--	2,220	2,220	--	--	2,220	2,220
COSTS $		--	--	557,799	557,799	--	--	557,799	557,799
WELLS		--	--	5	5				
FOOTAGE	2,500 - 3,749	--	--	14,452	14,452	--	--	2,890	2,890
COSTS $		--	--	3,745,989	3,745,989	--	--	749,198	749,198
WELLS		--	--	5	5				
FOOTAGE	3,750 - 4,999	--	--	21,990	21,990	--	--	4,398	4,398
COSTS $		--	--	6,047,861	6,047,861	--	--	1,209,572	1,209,572
WELLS		--	--	4	4				
FOOTAGE	5,000 - 7,499	--	--	23,680	23,680	--	--	5,920	5,920
COSTS $		--	--	4,881,547	4,881,547	--	--	1,220,387	1,220,387
WELLS		3	2	12	17				
FOOTAGE	7,500 - 9,999	26,534	17,782	107,982	152,298	8,845	8,891	8,999	8,959
COSTS $		27,024,100	11,877,236	41,075,348	79,976,684	9,008,033	5,938,618	3,422,946	4,704,511
WELLS		10	--	5	15				
FOOTAGE	10,000 - 12,499	116,852	--	56,891	173,743	11,685	--	11,378	11,583
COSTS $		55,137,161	--	12,397,259	67,534,420	5,513,716	--	2,479,452	4,502,295
WELLS		6	--	9	15				
FOOTAGE	12,500 - 14,999	77,952	--	126,130	204,082	12,992	--	14,014	13,605
COSTS $		51,776,614	--	28,974,571	80,751,185	8,629,436	--	3,219,397	5,383,413
WELLS		1	1	2	4				
FOOTAGE	15,000 - 17,499	15,300	15,070	32,022	62,392	15,300	15,070	16,011	15,598
COSTS $		12,387,625	9,018,210	9,657,245	31,063,080	12,387,625	9,018,210	4,828,623	7,765,770
WELLS		--	--	4	4				
FOOTAGE	17,500 - 19,999	--	--	73,604	73,604	--	--	18,401	18,401
COSTS $		--	--	30,684,962	30,684,962	--	--	7,671,241	7,671,241
WELLS		--	--	1	1				
FOOTAGE	20,000 & OVER	--	--	23,195	23,195	--	--	23,195	23,195
COSTS $		--	--	25,803,390	25,803,390	--	--	25,803,391	25,803,391
TOTAL WELLS		20	3	48	71				
TOTAL FOOTAGE		236,638	32,852	482,166	751,656	11,832	10,951	10,045	10,587
TOTAL COSTS $		146,325,500	20,895,446	163,825,971	331,046,917	7,316,275	6,965,149	3,413,041	4,662,633

APPENDIXES

Isolating Drilling Cost Changes in the Joint Association Survey

Since total JAS drilling costs (hereafter referred to as expenditures, expenditures per well and expenditures per foot) reflect the depth, type and location of wells drilled, average expenditures per well and expenditures per foot will be susceptible to fluctuations in the well population.

For example, in general, though not without exception, exploratory wells are more expensive to drill than are development wells, gas wells are more expensive than oil wells, oil wells are more expensive than dry holes, offshore wells are more expensive than onshore wells, and deeper wells are more expensive than shallow wells. Therefore, shifts in activity among these general categories can cause expenditures per foot and per well to increase or decrease.

However, changes in "drilling costs" are typically thought of as changes in the cost of drilling comparable wells in different years, much as changes in the Consumer Price Index reflect changes in a similar group of items. This means that in order to compare the impact of price change alone on the JAS drilling expenditures from one year to another, one must either compare the costs of similar type wells at similar depths in similar locations, or somehow hold these factors constant for the entire well population.

The JAS isn't intended to provide drilling cost data based on price alone, because most JAS users aren't interested in knowing how the cost to drill a single well varies from one year to another. The reason: the character of the well population can fluctuate dramatically from one year to the next. However, by accounting for differences in depth, type and general location of wells drilled, the JAS drilling cost data give companies a detailed basis for comparison with their own drilling experiences.

Methodology

The JAS provides estimated expenditures per well and per foot for wells by type, depth and location. A composite drilling cost index was derived by redistributing 1985, 1986 and 1987 JAS expenditures on the 1984 well population distribution. By holding these factors--depth, type and general location of the well--constant to 1984, changes in drilling costs alone were calculated for 1985-1987.

More specifically, the percentage of total wells and footage drilled represented by the smallest possible division in the data in 1984 was calculated and used to weight 1985-1987 expenditures per well and per foot. These weighted costs were then summed to arrive at an adjusted average cost per well and average cost per foot for oil, gas and dry holes, onshore, offshore and total U.S.

In this way, we are able to isolate the effect on expenditures of changes in drilling costs alone, and by difference, to determine the effect of compositional shifts in the JAS well population on the drilling expenditures. This gives us the ability to observe drilling cost changes from year to year.

Drilling Costs Decreased

Redistributing the 1985, 1986 and 1987 JAS drilling expenditures to reflect the depth, type and general location of wells drilled in 1984 reveals an actual decrease in drilling costs. Therefore, the increase in costs per well and per foot reported in the JAS for 1985 and 1986 can be attributed to year-to-year changes in the depth, type, and general location of wells. This accounts for differences between the JAS survey and price indicators that show drilling costs decreasing between 1984 and 1987.

Total U.S. costs reflect, proportionately, the changes in onshore and offshore costs. Drilling costs decreased moderately between 1984 and 1985, but declined more sharply between 1985 and 1986. In 1987, drilling costs showed an even sharper decrease. Tables 1-3 show the drilling cost index and changes in drilling costs on the new basis.

In 1985 and 1987, drilling costs decreased due to a drop in dry hole costs. Drilling cost decreases during 1986 were led by decreases in gas drilling costs.

U.S. gas well costs rose in 1985 due to the increases in offshore gas drilling costs. Although offshore oil well costs increased in 1985, U.S. oil costs decreased. Relative increases in U.S. dry hole costs resulted from increases in offshore dry hole costs in 1986. However, offshore dry hole costs decreased dramatically in 1987, contributing to a relative decrease in U.S. dry hole costs and an overall decrease in U.S. costs.

TABLE 1

ADJUSTED AVERAGE DRILLING COST INDICES--UNITED STATES
(1984=100)

	1985 AVG PER WELL	% CHG	1985 $ PER FOOT	% CHG	1986 AVG PER WELL	% CHG	1986 $ PER FOOT	% CHG	1987 AVG PER WELL	% CHG	1987 $ PER FOOT	% CHG
OIL:												
"Cost"	98.0	-2.0	97.9	-2.1	87.5	-10.7	87.3	-10.9	78.4	-10.4	78.1	-10.6
"Expenditure"	103.2	3.2	100.7	0.7	108.7	5.3	103.1	2.4	93.9	-13.7	88.0	-14.6
% Change	-5.0		-2.7		-19.5		-15.3		-16.5		-11.3	
GAS:												
"Cost"	100.8	0.8	100.5	0.5	89.4	-11.3	88.7	-11.8	73.6	-17.6	73.3	-17.4
"Expenditure"	103.9	3.9	104.8	4.8	106.8	2.8	104.7	-0.1	77.7	-27.3	78.3	-25.2
% Change	-3.0		-4.1		-16.3		-15.4		-5.3		-6.4	
DRY:												
"Cost"	95.5	-4.5	95.7	-4.3	90.5	-5.2	90.3	-5.7	67.2	-25.8	67.1	-25.6
"Expenditure"	113.1	13.1	109.7	9.7	118.3	4.5	113.9	3.9	78.7	-33.4	76.0	-33.3
% Change	-15.6		-12.8		-23.4		-20.8		-14.0		-11.7	
TOTAL:												
"Cost"	98.1	-1.9	98.0	-2.0	89.0	-9.3	88.6	-9.6	74.9	-15.8	73.6	-17.0
"Expenditure"	107.0	7.0	104.8	4.8	111.7	4.3	106.9	2.0	85.7	-23.3	81.7	-23.6
% Change	-8.4		-6.5		-20.3		-17.1		-12.6		-9.9	

"Expenditure" based on JAS estimated drilling expenditures which are a function of depth, type, general location and cost of wells drilled in that year. "Cost" numbers are redistributed well expenditures based on 1984 drilling activity.

Source: American Petroleum Institute, Joint Association Survey on Drilling Costs, 1984-1987.

TABLE 2

ADJUSTED AVERAGE DRILLING COST INDICES--ONSHORE
(1984=100)

	1985 AVG PER WELL	% CHG	1985 $ PER FOOT	% CHG	1986 AVG PER WELL	% CHG	1986 $ PER FOOT	% CHG	1987 AVG PER WELL	% CHG	1987 $ PER FOOT	% CHG
OIL:												
"Cost"	96.7	-3.3	96.7	-3.3	87.7	-9.3	87.5	-9.5	78.6	-10.3	78.3	-10.4
"Expenditure"	102.0	2.0	99.3	-0.7	100.4	-1.6	95.9	-3.4	88.1	-12.2	82.9	-13.6
% Change	-5.2		-2.6		-12.6		-8.8		-10.8		-5.5	
GAS:												
"Cost"	100.1	0.1	99.8	-0.2	88.0	-12.1	87.3	-12.5	73.8	-16.1	73.6	-15.8
"Expenditure"	103.5	3.5	104.5	4.5	99.2	-4.2	98.0	-6.2	80.2	-19.1	80.8	-17.6
% Change	-3.3		-4.5		-11.3		-10.9		-8.0		-8.9	
DRY:												
"Cost"	98.6	-1.4	98.6	-1.4	89.8	-8.9	89.8	-8.9	70.7	-21.4	70.6	-21.4
"Expenditure"	109.0	9.0	106.1	6.1	110.5	1.4	107.3	1.2	75.0	-32.1	72.9	-32.0
% Change	-9.6		-7.0		-18.7		-16.3		-5.7		-3.2	
TOTAL:												
"Cost"	98.2	-1.8	98.1	-1.9	88.3	-10.0	88.1	-10.3	76.3	-13.7	75.0	-14.8
"Expenditure"	105.0	5.0	102.9	2.9	103.1	-1.9	99.4	-3.3	60.2	-41.6	57.6	-42.1
% Change	-6.5		-4.6		-14.3		-11.5		26.8		30.2	

"Expenditure" based on JAS estimated drilling expenditures which are a function of depth, type, general location and cost of wells drilled in that year. "Cost" numbers are redistributed well expenditures based on 1984 drilling activity.

Source: American Petroleum Institute, Joint Association Survey on Drilling Costs, 1984-1987.

TABLE 3

ADJUSTED AVERAGE DRILLING COST INDICES--OFFSHORE
(1984=100)

	1985 AVG PER WELL	% CHG	1985 $ PER FOOT	% CHG	1986 AVG PER WELL	% CHG	1986 $ PER FOOT	% CHG	1987 AVG PER WELL	% CHG	1987 $ PER FOOT	% CHG
OIL:												
"Cost"	106.9	6.9	106.4	6.4	86.1	-19.5	86.2	-19.0	77.0	-10.6	76.3	-11.6
"Expenditure"	126.1	26.1	123.3	23.3	114.9	-8.9	109.9	-10.9	114.2	-0.6	106.2	-3.4
% Change	-15.2		-13.7		-25.1		-21.5		-32.6		-28.2	
GAS:												
"Cost"	103.8	3.8	103.5	3.5	95.7	-7.8	94.4	-8.7	72.9	-23.8	72.0	-23.7
"Expenditure"	116.4	16.4	111.2	11.2	125.1	7.4	114.6	3.1	81.6	-34.7	76.2	-33.5
% Change	-10.8		-6.9		-23.5		-17.6		-10.7		-5.5	
DRY:												
"Cost"	88.6	-11.4	89.1	-10.9	92.1	3.9	91.3	2.5	59.3	-35.6	59.2	-35.2
"Expenditure"	105.5	5.5	106.1	6.1	108.1	2.4	105.4	-0.6	65.4	-39.5	66.9	-36.5
% Change	-16.0		-16.0		-14.8		-13.4		-9.3		-11.5	
TOTAL:												
"Cost"	97.5	-2.5	97.3	-2.7	91.5	-6.2	89.9	-7.6	67.6	-26.1	66.7	-25.9
"Expenditure"	115.2	15.2	112.2	12.2	113.3	-1.7	107.7	-4.0	81.9	-27.7	79.4	-26.3
% Change	-15.4		-13.3		-19.2		-16.5		-17.5		-16.0	

"Expenditure" based on JAS estimated drilling expenditures which are a function of depth, type, general location and cost of wells drilled in that year. "Cost" numbers are redistributed well expenditures based on 1984 drilling activity.

Source: American Petroleum Institute, Joint Association Survey on Drilling Costs, 1984-1987.

APPENDIX B

JOINT ASSOCIATION SURVEY ON DRILLING COSTS

CONFIDENTIAL

WELLS DRILLED, FOOTAGE, AND COST IN THE U.S.

CONFIDENTIAL

PAGE

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER
ABC OIL COMPANY	#1 J.M. OBERMILLER	CA	ON	04-029-23459

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE
EXP - OIL	1	0	3456	08/87	031	15-N	053-E			

COUNTY NAME	LOCATION	TOTAL COST
KERN	958 FNL 388 FWL	

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER
ABC OIL COMPANY	#8 P.J. GIBSON	OK	ON	35-053-10432

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE
DEV - GAS	0	1	2335	04/87	017	19-N	044-E			

COUNTY NAME	LOCATION	TOTAL COST
GRANT	2130 FSL 1560 FWL	

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER
ABC OIL COMPANY	B-3 OCS-G-3232	LA	OF	17-710-22106

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE
DEV-DRY	0	0	8724	11/87						

COUNTY NAME	LOCATION	TOTAL COST
EUGENE ISLAND SOUTH	BLOCK 361	

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

OPERATOR NAME	WELL NUMBER - LEASE NAME	STATE	SH	WELL IDENTIFICATION NUMBER

TYPE	OIL ZONES	GAS ZONES	DEPTH	COMPLETION DATE	SECTION	TWP	RANGE	CDS	X COORD or LATITUDE	Y COORD or LONGITUDE

COUNTY NAME	LOCATION	TOTAL COST

INDIVIDUAL SUBMITTING REPORT: _____

TELEPHONE NUMBER: AC _____ _____

INSTRUCTIONS AND DEFINITIONS FOR DRILLING COSTS

1. **WELLS TO BE REPORTED.** Report each domestic well completed by you as OPERATOR (whether actually drilled by you or drilled for you by a contractor), in the survey year. Report each well completed by you as operator regardless of the size of your working interest in the well. Do not report wells drilled by others in which you may have had only a part of a working interest regardless of the size of such interest. Do not report wells started in the survey year or in prior years, but not completed as of December 31 of the survey year. Do not report wells reentered for completion at shallower depths, old wells drilled deeper, old wells worked over, stratigraphic tests, core test, or service wells (including input wells).

2. **SHORE.** Enter "OFF" if well is located offshore; enter "ON" if it is onshore. An offshore well is one which is bottomed at, or produces from, a point which lies seaward of the coastline. If a state agency uses a different basis for classifying onshore and offshore wells, the state classification should be used. In general, the term "coastline" means the line of ordinary low water along that portion of the coast which is in direct contact with the open sea or the line marking the seaward limit of inland waters. For the purposes of the JAS Cook Inlet (Alaska) is classified as "offshore"

3. **OP CODE.** Make no entry. The API will supply the operator code

4. **WELL IDENTIFICATION NUMBER.** Enter the STATE DESIGNATED API NUMBER if it is available. Where states do not assign API well numbers, or if you do not know the number, leave this item blank.

5. **TYPE.** Insert the classification for each well reported as either an exploratory (EXP) or a development (DEV) well. Exploratory wells include new-field wildcats, new-pool wildcats, deeper-pool tests, shallower-pool tests, and outposts (extensions). Development wells include all wells drilled to produce oil and gas from pools discovered by previous drilling.

   Subclassify all wells as either oil, gas or dry holes, e.g. "EXP-OIL", "DEV-GAS", "EXP-DRY". An oil well is a well completed for the production of crude oil from at least one oil zone or reservoir. A gas well is one which can produce hydrocarbons existing initially in a gaseous phase in the reservoir. So-called gas condensate wells should be reported as gas wells. A dry hole is an exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well. The state regulatory classification should be used, if available; if not available, use a classification by company engineers.

   Count MULTIPLE COMPLETIONS as one well. (See Item 6 for definition.)

6. **OIL ZONES, GAS ZONES.** Enter the total number of separately producing oil zones and gas zones (reservoirs).

   As noted under Item 5, a multiple completion should be reported as one well. A multiple completion well is a well equipped to produce oil and/or gas separately from more than one reservoir. SUCH WELLS CONTAIN MULTIPLE STRINGS OF TUBING OR OTHER EQUIPMENT WHICH PERMIT PRODUCTION FROM THE VARIOUS COMPLETIONS TO BE MEASURED AND ACCOUNTED FOR SEPARATELY.

   Report a multiple completion well as an oil well if oil is produced from at least one of several zones, even though gas and gas condensate may be produced from one or more zones in the same well. Report a multiple completion well as a gas well if oil is not produced from any of the several zones.

   For a dry hole enter the word "DRY"

7. **DEPTH.** Report for each well the total feet of penetration measured down the well bore. Include all plugged back footage, but exclude bypassed footage resulting from remedial sidetrack drilling operations. For OFFSHORE WELLS drilled from a platform or a barge over water and the reference point is above water, the depth of the water is included in the total length of the well bore.

8. **COMPLETION DATE.** Enter the month and year of completion.

9. **SECTION, TWP, RANGE.** Enter location data if appropriate for area.

10. **COUNTY NAME AND LOCATION.** For each onshore well reported provide the county name, and for state and federal offshore waters provide pseudo-county names. Under location enter the designated block numbers for state and federal offshore wells and any other available information that would be helpful in identifying well locations.

11. **TOTAL COST.** Report the TOTAL cost (tangible and intangible) of each well completed by you as operator in the survey year (whether actually drilled by you or drilled for you by contractors). The TOTAL of such costs should be reported even though you as operator had only a part of a working interest in the well.

    Do not report costs of wells drilled by others in which you had a working interest regardless of the size of such interest. The costs to be reported are those associated with wells which are completed during the survey year and the dollar amount to be reported is the accumulated cost of such wells from the time locations were made until the wells were completed as productive wells or abandoned after drilling was terminated because they were non-productive.

    PLEASE ROUND OFF TOTAL COSTS TO THE NEAREST DOLLAR.

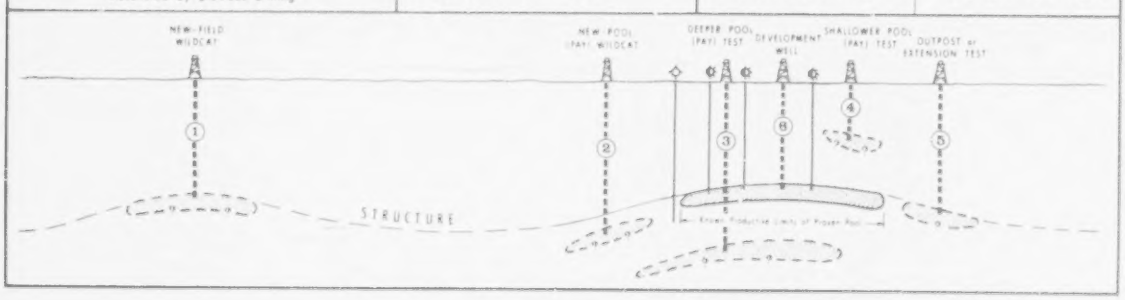
    In general, the elements contributing to reported cost are the expenditures for drilling dry holes and productive wells and equipping new productive wells through the "Christmas tree" installation. More specifically, these cost elements are the costs of labor, materials, supplies, water, fuels, power, and direct overhead (i.e., field, district, and regional), for such operations as site preparation, road building, erecting and dismantling derricks and drilling rigs, drilling hole, running and cementing casing, hauling materials, etc. Include the total cost of water, if purchased, or cost of water well, if drilled and chargeable to oil or gas well drilling operations. Well costs also include machinery and tool charges and rentals, and depreciation charges, where appropriate, for rigs and other equipment and facilities which will be used in drilling more than one well. Deduct the condition value of materials salvaged after use where appropriate.

    Do not report the cost of lease equipment such as artificial lift equipment and downhole lift equipment, flow lines, flow tanks, separators, etc., that are required for production. Do not reduce the costs by test well, bottom hole, or dry hole contributions.

    For OFFSHORE WELLS, include costs on fixed platforms and islands. Where facilities serve more than one well, the costs should be allocated to each well on the basis of the operator's best current estimate of the ultimate number of wells that will use the facility. Also, include cost expirations (depreciation or amortization) for company-owned mobile platforms, barges, and tenders.

AAPG and API Classification of Wells

<table>
<tr><th colspan="4" rowspan="2">OBJECTIVE OF DRILLING</th><th rowspan="2">INITIAL CLASSIFICATION ◇
WHEN DRILLING IS STARTED</th><th colspan="4">FINAL CLASSIFICATION
AFTER COMPLETION OR ABANDONMENT</th></tr>
<tr><th colspan="2">SUCCESSFUL ● ✡ ✱</th><th colspan="2">UNSUCCESSFUL ✧</th></tr>
<tr><td colspan="4">Drilling for a new field on a structure or in an environment never before productive</td><td>1. NEW-FIELD WILDCAT</td><td colspan="2">NEW-FIELD DISCOVERY WILDCAT</td><td colspan="2">DRY NEW-FIELD WILDCAT</td></tr>
<tr><td rowspan="3">Drilling for a new pool on a structure or in a geological environment already productive</td><td rowspan="3">NEW POOL TESTS</td><td colspan="2">Drilling outside limits of a proved area of pool</td><td>2. NEW-POOL (PAY) WILDCAT</td><td rowspan="3">NEW-POOL DISCOVERY WELLS (Sometimes extension wells)</td><td>NEW-POOL DISCOVERY WILDCAT (Sometimes an extension well)</td><td rowspan="3">DRY NEW-POOL TESTS</td><td>DRY NEW-POOL WILDCAT</td></tr>
<tr><td rowspan="2">Drilling inside limits of proved area of pool</td><td>For a new pool below deepest proven pool</td><td>3. DEEPER POOL (PAY) TEST</td><td>DEEPER POOL DISCOVERY WELL</td><td>DRY DEEPER POOL TEST</td></tr>
<tr><td>For a new pool above deepest proven pool</td><td>4. SHALLOWER POOL (PAY) TEST</td><td>SHALLOWER POOL DISCOVERY WELL</td><td>DRY SHALLOWER POOL TEST</td></tr>
<tr><td colspan="4">Drilling for long extension of a partly developed pool</td><td>5. OUTPOST or EXTENSION TEST</td><td colspan="2">EXTENSION WELL (Sometimes a new-pool discovery well)</td><td colspan="2">DRY OUTPOST OR DRY EXTENSION TEST</td></tr>
<tr><td colspan="4">Drilling to exploit or develop a hydrocarbon accumulation discovered by previous drilling</td><td>6. DEVELOPMENT WELL</td><td colspan="2">DEVELOPMENT WELL</td><td colspan="2">DRY DEVELOPMENT WELL</td></tr>
</table>



LAHEE CLASSIFICATION OF WELLS, AS APPLIED BY CSD

Tests drilled with the intent of being completed as hydrocarbon producers if found

NEW FIELD WILDCAT. A new field wildcat is located far from producing pools, and on a structure which has not produced before. In regions where local structure has little or no control on accumulation, these holes are generally at least 2 miles from the nearest productive area. Distance, however, is not the determining factor. The classification is based on the degree of risk assumed by the operator, and his intention to test a structure or stratigraphic condition not previously proved productive.

NEW-POOL (PAY) WILDCAT. A new-pool wildcat is located to explore for new pools on a structure already producing, but off to one side of the presently producing area. In some regions where local structure is almost negligible as a control, exploration holes of this group may be called "near wildcats." Such will usually be less than 2 miles from the nearest productive area. Sometimes a new-pool wildcat may extend a pool already partly developed, if so its final classification is an Extension.

DEEPER-POOL (PAY) TEST. A deeper-pool test is an exploratory hole located within the productive area of a pool, or pools, already partly or wholly developed. It is drilled below the deepest such pool penetrated by it to explore for deeper unknown prospects. Sometimes such a hole extends a deeper pool which has been partly developed in another part of the field.

SHALLOWER-POOL (PAY) TEST. A shallower-pool test is exploratory only if drilled in search of some new productive reservoir, unknown but possibly suspected from data secured from other wells. The test must be located within the productive area of a pool, or pools, previously developed. Sometimes such a test extends a shallower-pool partly developed elsewhere in the same field.

OUTPOST OR EXTENSION TEST. An outpost is located and drilled with the expectation of extending for a considerable distance the productive area of a partly developed pool. It is usually two or more locations distant from the nearest productive area. Sometimes an outpost discovers a new pool.

DEVELOPMENT WELL. A well drilled to exploit a hydrocarbon accumulation discovered by previous drilling.

Tests drilled without the intent of being completed for hydrocarbon production

STRATIGRAPHIC TEST. A drilling effort, geologically directed, to obtain information pertaining to a specific earth condition that might lead toward a possible accumulation of hydrocarbon. It must be drilled without the intention of being completed for hydrocarbon production. This classification includes tests identified as core tests by some operators.

SERVICE WELL. A well that is either drilled or completed for the purpose of supporting production of an existing field through observation, injection, water supply, etc.

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SUMMARY OF SAMPLE DATA - 1987

EXPLORATORY WELLS

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		9	9	57	75				
FOOTAGE	0 - 1,249	8,620	7,056	44,645	60,321	958	784	783	804
COSTS $		258,866	278,833	1,280,419	1,818,118	28,763	30,981	22,463	24,242
WELLS		6	31	123	160				
FOOTAGE	1,250 - 2,499	11,720	58,583	234,744	305,047	1,953	1,890	1,908	1,907
COSTS $		401,884	5,015,553	5,827,516	11,244,953	66,981	161,792	47,378	70,281
WELLS		36	29	236	301				
FOOTAGE	2,500 - 3,749	117,510	91,846	761,154	970,510	3,264	3,167	3,225	3,224
COSTS $		4,712,882	6,526,268	20,189,184	31,428,334	130,913	225,044	85,547	104,413
WELLS		90	33	474	597				
FOOTAGE	3,750 - 4,999	392,047	142,411	2,064,816	2,599,274	4,356	4,315	4,356	4,354
COSTS $		12,516,319	4,645,822	49,934,595	67,096,736	139,070	140,782	105,347	112,390
WELLS		127	101	605	833				
FOOTAGE	5,000 - 7,499	775,553	632,289	3,722,600	5,130,442	6,107	6,260	6,153	6,159
COSTS $		30,559,962	31,814,287	117,333,227	179,707,476	240,630	314,993	193,939	215,735
WELLS		89	55	342	486				
FOOTAGE	7,500 - 9,999	774,758	474,457	2,946,864	4,196,079	8,705	8,626	8,617	8,634
COSTS $		44,513,550	43,712,820	160,158,234	248,384,604	500,152	794,779	468,299	511,079
WELLS		50	62	203	315				
FOOTAGE	10,000 - 12,499	555,433	683,183	2,235,036	3,473,652	11,109	11,019	11,010	11,027
COSTS $		35,470,633	77,610,877	192,233,817	305,315,327	709,413	1,251,788	946,965	969,255
WELLS		29	21	109	159				
FOOTAGE	12,500 - 14,999	392,385	282,411	1,484,710	2,159,506	13,531	13,448	13,621	13,582
COSTS $		64,615,699	47,264,234	189,178,861	301,058,794	2,228,128	2,250,678	1,735,586	1,893,452
WELLS		4	17	33	54				
FOOTAGE	15,000 - 17,499	64,623	269,253	526,173	860,049	16,156	15,838	15,945	15,927
COSTS $		6,824,161	57,848,311	96,588,100	161,260,572	1,706,040	3,402,842	2,926,912	2,986,307
WELLS		--	8	15	23				
FOOTAGE	17,500 - 19,999	--	145,718	277,142	422,860	--	18,215	18,476	18,385
COSTS $		--	34,883,262	88,426,113	123,309,375	--	4,360,408	5,895,074	5,361,277
WELLS		--	1	2	3				
FOOTAGE	20,000 & OVER	--	20,900	45,287	66,187	--	20,900	22,644	22,062
COSTS $		--	7,455,388	41,353,228	48,808,616	--	7,455,388	20,676,615	16,269,539
TOTAL WELLS		440	367	2,199	3,006				
TOTAL FOOTAGE		3,092,649	2,808,107	14,343,171	20,243,927	7,029	7,652	6,523	6,735
TOTAL COSTS $		199,873,956	317,055,655	962,503,294	1,479,432,905	454,259	863,912	437,700	492,160

SUMMARY OF SAMPLE DATA - 1987

DEVELOPMENT WELLS

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS				AVERAGE DEPTH AND COST PER WELL			
		OIL WELLS	GAS WELLS	DRY HOLES	TOTAL	OIL	GAS	DRY	TOTAL
WELLS		1,034	68	123	1,225				
FOOTAGE	0 - 1,249	984,780	55,619	102,366	1,142,765	952	818	832	933
COSTS $		53,916,894	1,602,233	2,907,999	58,427,126	52,144	23,562	23,642	47,696
WELLS		1,452	180	176	1,808				
FOOTAGE	1,250 - 2,499	2,471,631	341,486	328,454	3,141,571	1,702	1,897	1,866	1,738
COSTS $		124,017,364	15,355,914	9,606,532	148,979,810	85,411	85,311	54,583	82,400
WELLS		1,115	558	305	1,978				
FOOTAGE	2,500 - 3,749	3,436,385	1,768,733	960,280	6,165,398	3,082	3,170	3,148	3,117
COSTS $		142,843,292	81,338,448	23,739,070	247,920,810	128,111	145,768	77,833	125,339
WELLS		1,154	296	335	1,785				
FOOTAGE	3,750 - 4,999	5,140,885	1,282,414	1,461,200	7,884,499	4,455	4,332	4,362	4,417
COSTS $		192,664,431	46,464,306	37,800,273	276,929,010	166,954	156,974	112,837	155,142
WELLS		1,267	679	460	2,406				
FOOTAGE	5,000 - 7,499	7,938,000	4,215,629	2,864,570	15,018,199	6,265	6,209	6,227	6,242
COSTS $		400,410,643	171,974,563	91,540,551	663,925,757	316,031	253,276	199,001	275,946
WELLS		892	433	276	1,601				
FOOTAGE	7,500 - 9,999	7,786,563	3,729,643	2,358,115	13,874,321	8,729	8,613	8,544	8,666
COSTS $		590,715,438	232,459,936	89,036,596	912,211,970	662,237	536,859	322,596	569,776
WELLS		353	259	177	789				
FOOTAGE	10,000 - 12,499	3,913,881	2,881,881	1,958,544	8,754,306	11,087	11,127	11,065	11,095
COSTS $		556,053,687	270,430,448	138,251,821	964,735,956	1,575,223	1,044,133	781,084	1,222,733
WELLS		85	120	70	275				
FOOTAGE	12,500 - 14,999	1,148,153	1,613,615	935,813	3,697,581	13,508	13,447	13,369	13,446
COSTS $		205,000,281	211,270,970	98,152,354	514,423,605	2,411,768	1,760,591	1,402,177	1,870,631
WELLS		16	55	38	109				
FOOTAGE	15,000 - 17,499	251,769	876,484	608,147	1,736,400	15,736	15,936	16,004	15,930
COSTS $		47,275,895	160,502,134	102,232,428	310,010,457	2,954,744	2,918,221	2,690,327	2,844,133
WELLS		2	26	17	45				
FOOTAGE	17,500 - 19,999	36,345	472,311	307,730	816,386	18,173	18,166	18,102	18,142
COSTS $		3,950,730	102,224,809	64,967,151	171,142,690	1,975,365	3,931,724	3,821,597	3,803,171
WELLS		--	1	1	2				
FOOTAGE	20,000 & OVER	--	21,608	21,700	43,308	--	21,608	21,700	21,654
COSTS $		--	10,646,878	4,233,758	14,880,636	--	10,646,878	4,233,758	7,440,318
TOTAL WELLS		7,370	2,675	1,978	12,023				
TOTAL FOOTAGE		33,108,392	17,259,423	11,906,919	62,274,734	4,492	6,452	6,020	5,180
TOTAL COSTS $		2,316,848,655	1,304,270,639	662,468,533	4,283,587,827	314,362	487,578	334,918	356,283

SUMMARY OF SAMPLE DATA - 1987

SINGLE-COMPLETION WELLS

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS: OIL WELLS	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS: GAS WELLS	AVERAGE DEPTH AND COST PER WELL: OIL	AVERAGE DEPTH AND COST PER WELL: GAS
WELLS		1,042	77		
FOOTAGE	0 - 1,249	992,175	62,675	952	814
COSTS $		54,153,360	1,881,066	51,971	24,429
WELLS		1,453	208		
FOOTAGE	1,250 - 2,499	2,472,977	394,054	1,702	1,894
COSTS $		124,222,348	20,073,686	85,494	96,508
WELLS		1,143	570		
FOOTAGE	2,500 - 3,749	3,526,734	1,806,915	3,086	3,170
COSTS $		146,711,893	85,246,402	128,357	149,555
WELLS		1,240	321		
FOOTAGE	3,750 - 4,999	5,515,498	1,391,242	4,448	4,334
COSTS $		204,512,668	48,916,059	164,930	152,386
WELLS		1,358	737		
FOOTAGE	5,000 - 7,499	8,469,485	4,572,527	6,237	6,204
COSTS $		409,439,534	184,693,564	301,502	250,602
WELLS		946	439		
FOOTAGE	7,500 - 9,999	8,251,409	3,785,435	8,722	8,623
COSTS $		589,991,939	244,657,754	623,670	557,307
WELLS		383	293		
FOOTAGE	10,000 - 12,499	4,250,251	3,252,745	11,097	11,102
COSTS $		551,496,107	304,745,946	1,439,938	1,040,089
WELLS		111	137		
FOOTAGE	12,500 - 14,999	1,500,311	1,844,514	13,516	13,464
COSTS $		244,149,980	252,299,740	2,199,549	1,841,604
WELLS		19	71		
FOOTAGE	15,000 - 17,499	301,092	1,129,597	15,847	15,910
COSTS $		41,712,431	215,091,280	2,195,391	3,029,455
WELLS		2	34		
FOOTAGE	17,500 - 19,999	36,345	618,029	18,173	18,177
COSTS $		3,950,730	137,108,071	1,975,365	4,032,590
WELLS		--	2		
FOOTAGE	20,000 & OVER	--	42,508	--	21,254
COSTS $		--	18,102,266	--	9,051,133

SUMMARY OF SAMPLE DATA - 1987

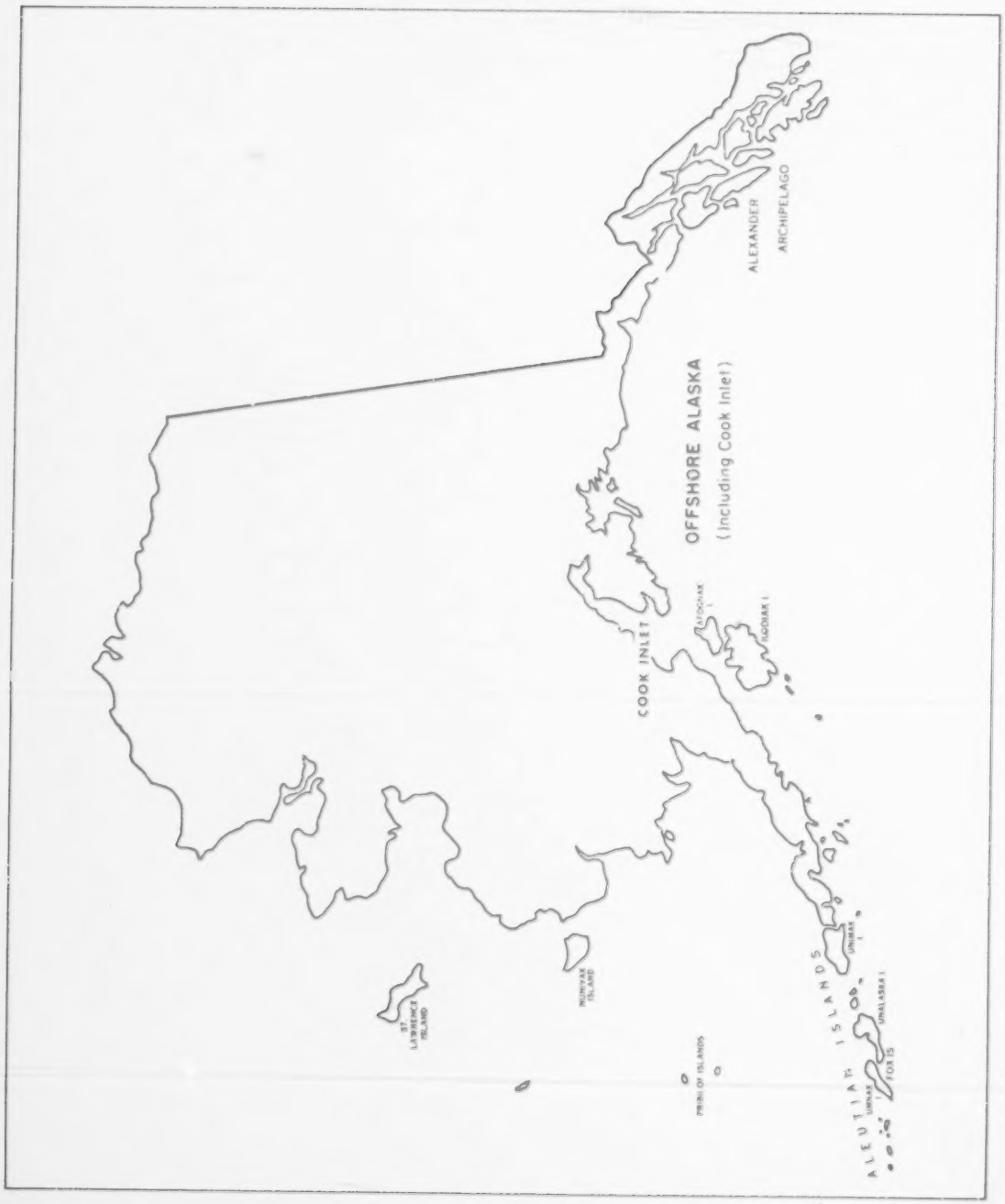
MULTIPLE-COMPLETION WELLS

	DEPTH INTERVAL (FEET)	TOTAL NUMBER OF WELLS, FOOTAGE DRILLED, AND COSTS		AVERAGE DEPTH AND COST PER WELL	
		OIL WELLS	GAS WELLS	OIL	GAS
WELLS	0 - 1,249	1	--		
FOOTAGE		1,225	--	1,225	--
COSTS $		22,400	--	22,400	--
WELLS	1,250 - 2,499	5	3		
FOOTAGE		10,374	6,015	2,075	2,005
COSTS $		196,900	297,781	39,380	99,260
WELLS	2,500 - 3,749	8	17		
FOOTAGE		27,161	53,664	3,395	3,157
COSTS $		844,281	2,618,314	105,535	154,018
WELLS	3,750 - 4,999	4	8		
FOOTAGE		17,434	33,583	4,359	4,198
COSTS $		668,082	2,194,069	167,021	274,259
WELLS	5,000 - 7,499	36	43		
FOOTAGE		244,068	275,391	6,780	6,404
COSTS $		21,531,071	19,095,286	598,085	444,076
WELLS	7,500 - 9,999	35	49		
FOOTAGE		309,912	418,665	8,855	8,544
COSTS $		45,237,049	31,515,002	1,292,487	643,163
WELLS	10,000 - 12,499	20	28		
FOOTAGE		219,063	312,319	10,953	11,154
COSTS $		40,028,213	43,295,379	2,001,411	1,546,264
WELLS	12,500 - 14,999	3	4		
FOOTAGE		40,227	51,512	13,409	12,878
COSTS $		25,466,000	6,235,464	8,488,667	1,558,866
WELLS	15,000 - 17,499	1	1		
FOOTAGE		15,300	16,140	15,300	16,140
COSTS $		12,387,625	3,259,165	12,387,625	3,259,165
WELLS	17,500 - 19,999	--	--		
FOOTAGE		--	--	--	--
COSTS $		--	--	--	--
WELLS	20,000 & OVER	--	--		
FOOTAGE		--	--	--	--
COSTS $		--	--	--	--

J.A.S SAMPLE DISTRIBUTION 1983 - 1987

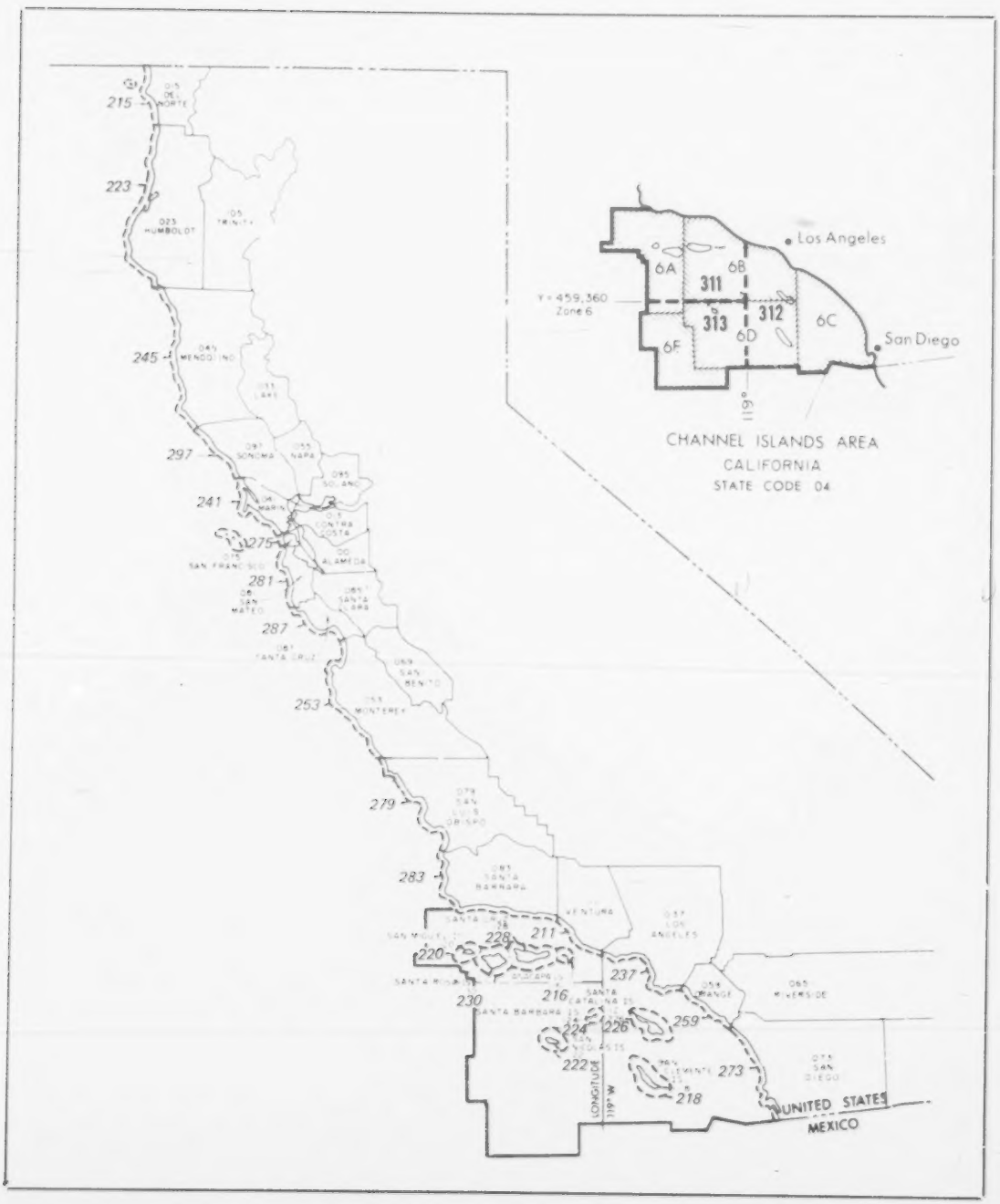
No. of Wells Drilled	1983		1984		1985		1986		1987	
	No. of Co's	No. of Wells	No. of Co's	No. of Wells	No. of Co's	No. of Wells	No. of Co's	No. of Wells	No. of Co's	No. of Wells
1-4	735	1,508	740	1,550	719	1,491	775	1,501	958	1,841
5-9	315	2,087	291	1,912	281	1,818	214	1,382	250	1,601
10-24	283	4,198	255	3,901	256	3,916	164	2,460	175	2,617
25-49	86	2,876	87	2,968	66	2,209	41	1,356	40	1,296
50-99	28	1,859	38	2,629	31	2,032	19	1,373	17	1,201
100 & over	28	10,110	26	10,483	33	13,572	23	7,221	18	6,473
Total	1,475	22,638	1,437	23,443	1,386	25,038	1,236	15,293	1,458	15,029

MAP I
SUBDIVISIONS OF ALASKA

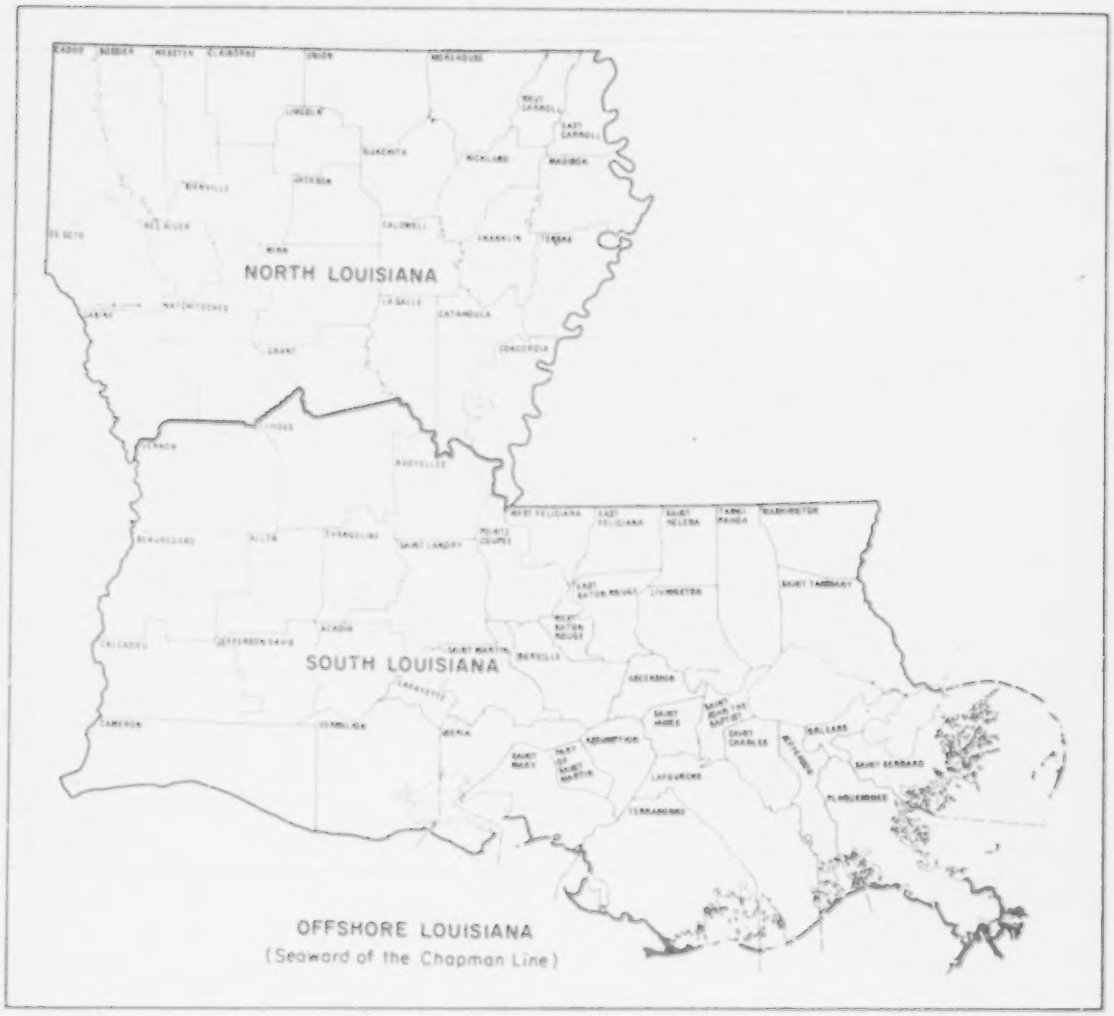


MAP II
SUBDIVISIONS OF CALIFORNIA

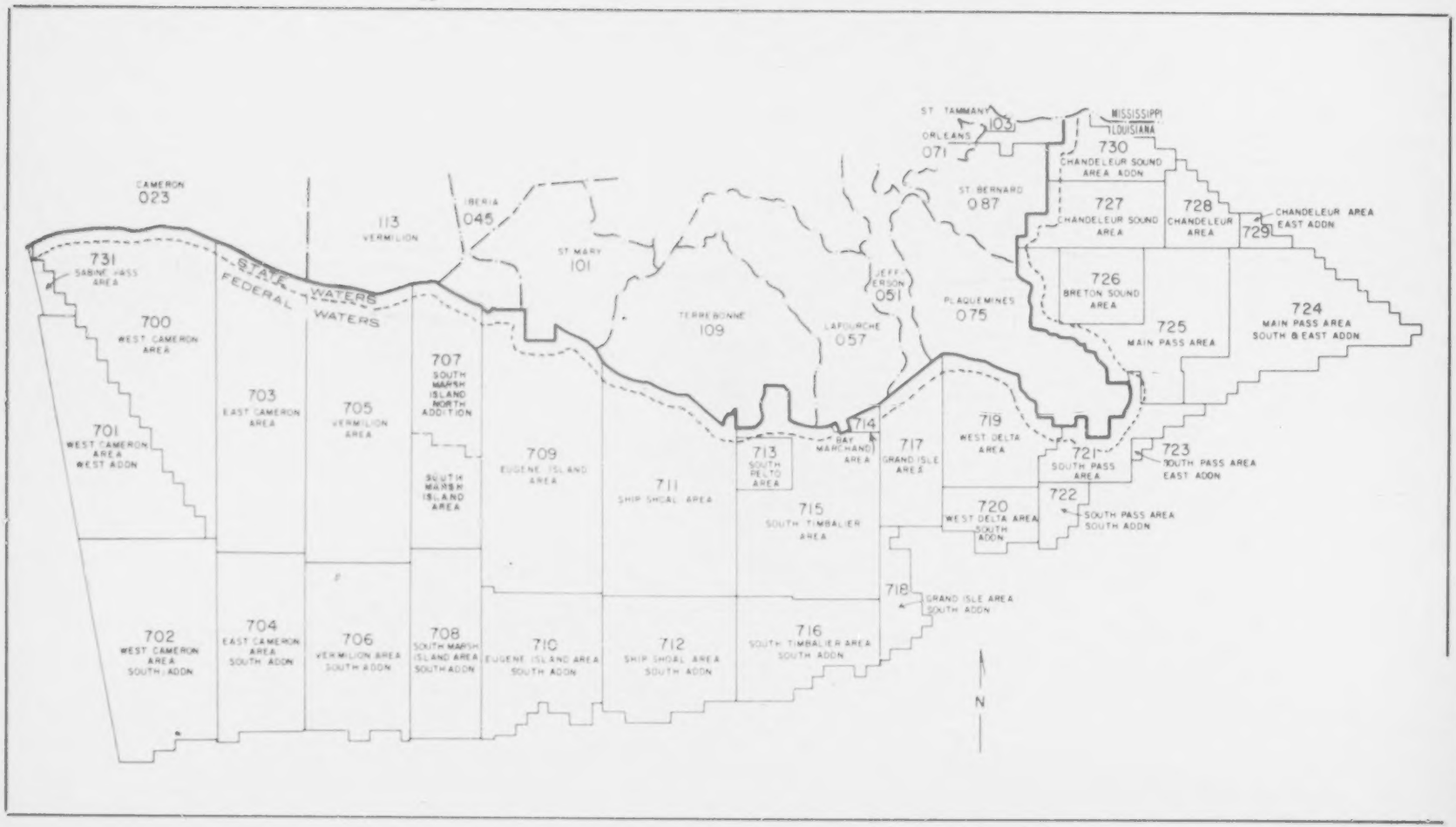
MAP III
CALIFORNIA OFFSHORE



MAP IV
SUBDIVISIONS OF LOUISIANA

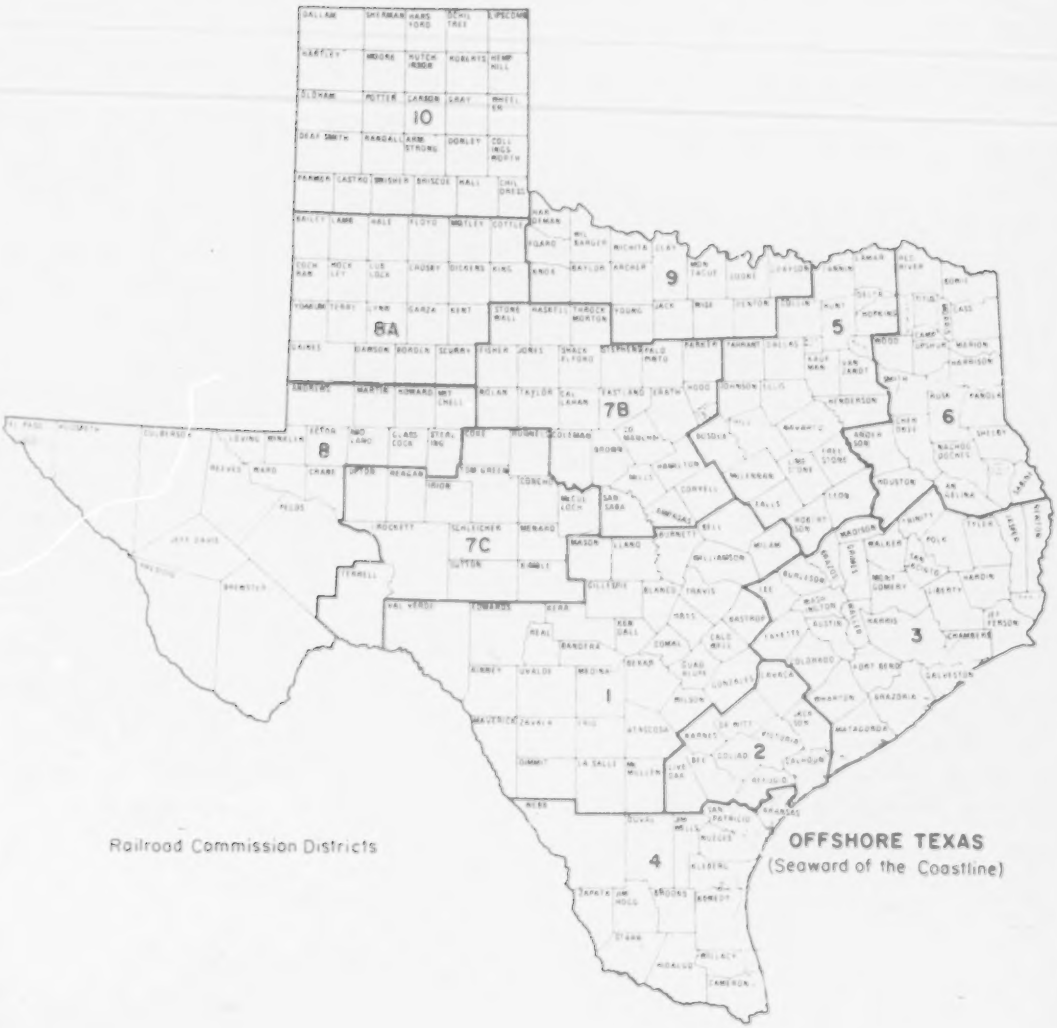


MAP V
LOUISIANA OFFSHORE



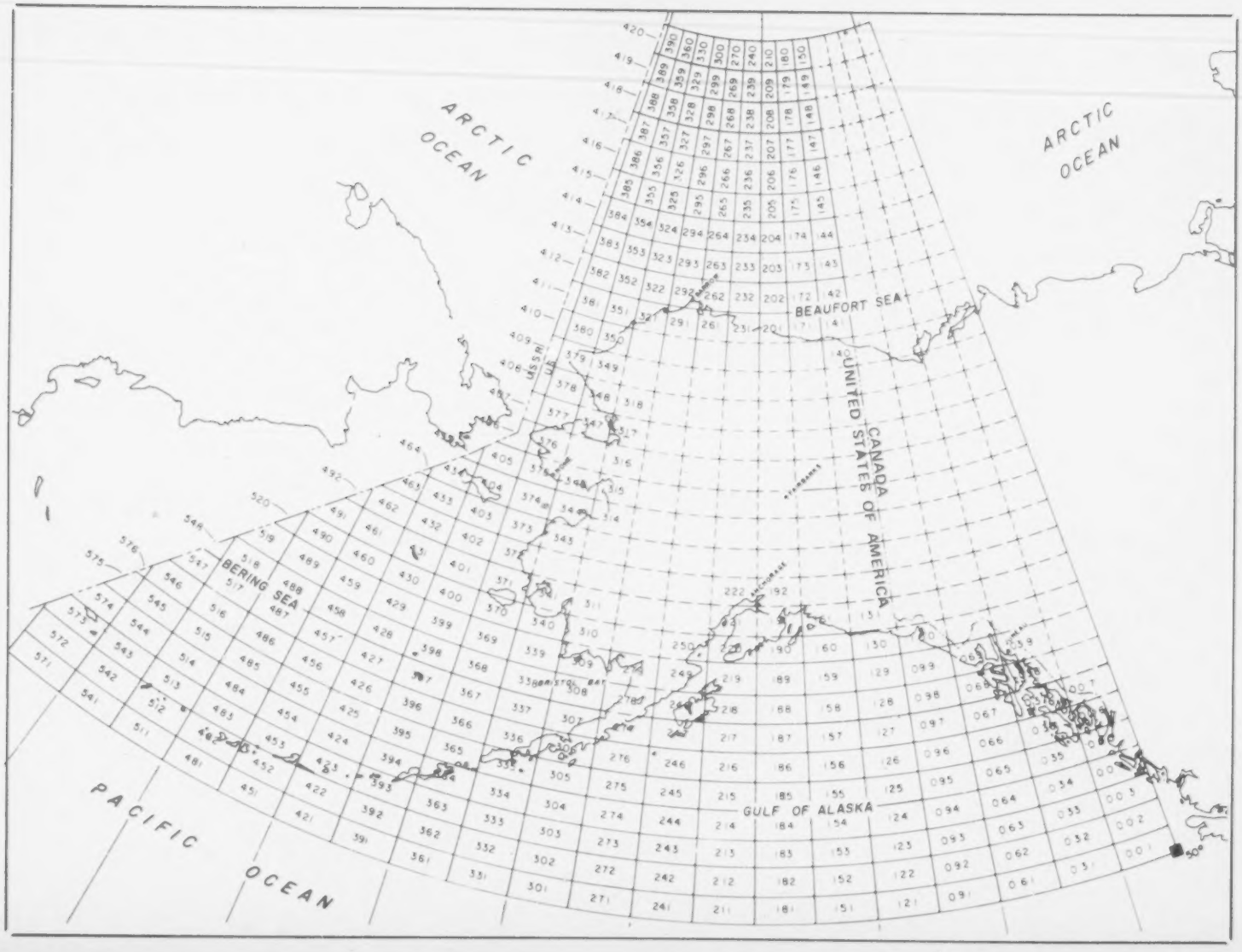
MAP VI
SUBDIVISIONS OF NEW MEXICO

MAP VII
SUBDIVISIONS OF TEXAS

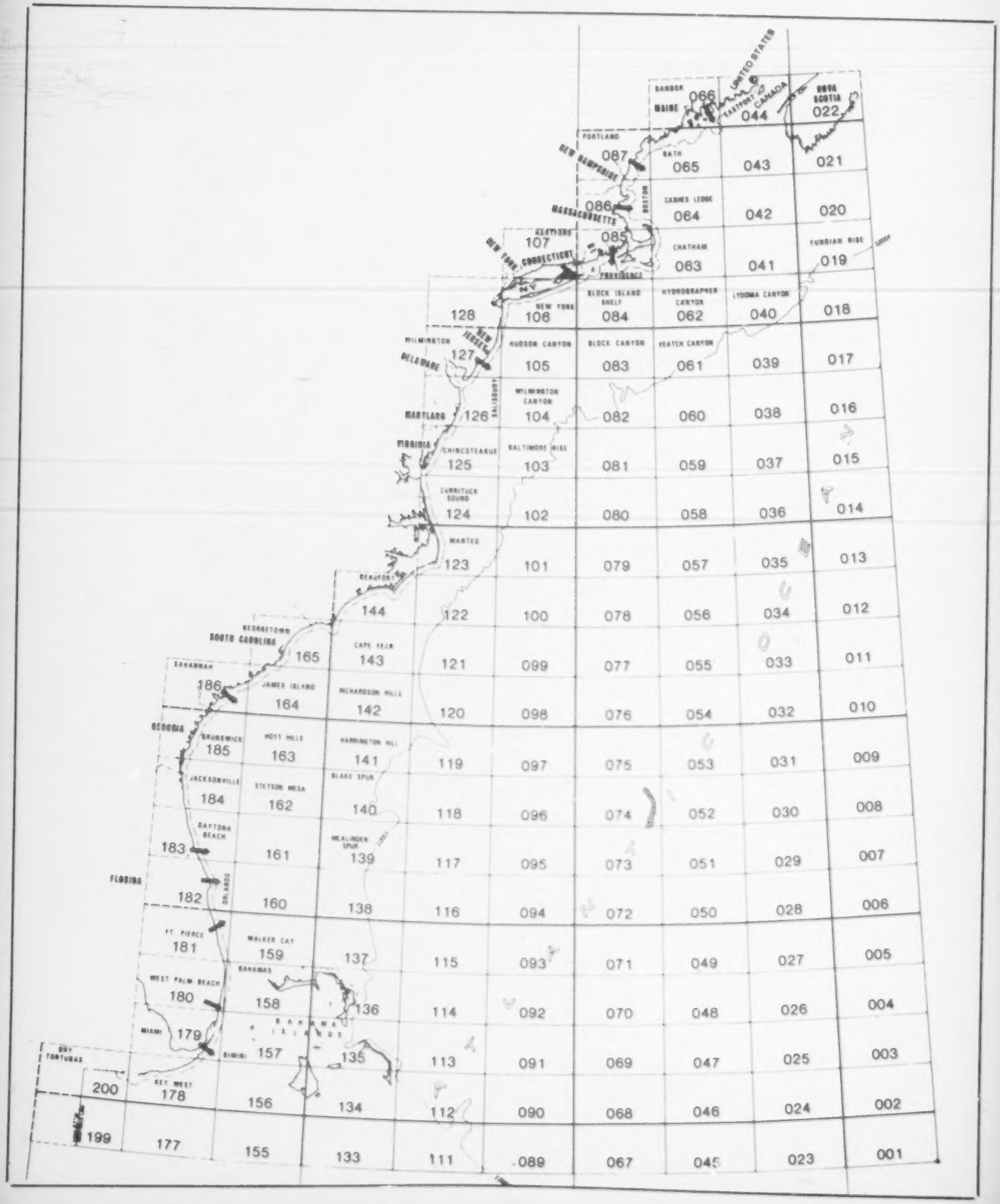


MAP VIII
TEXAS OFFSHORE

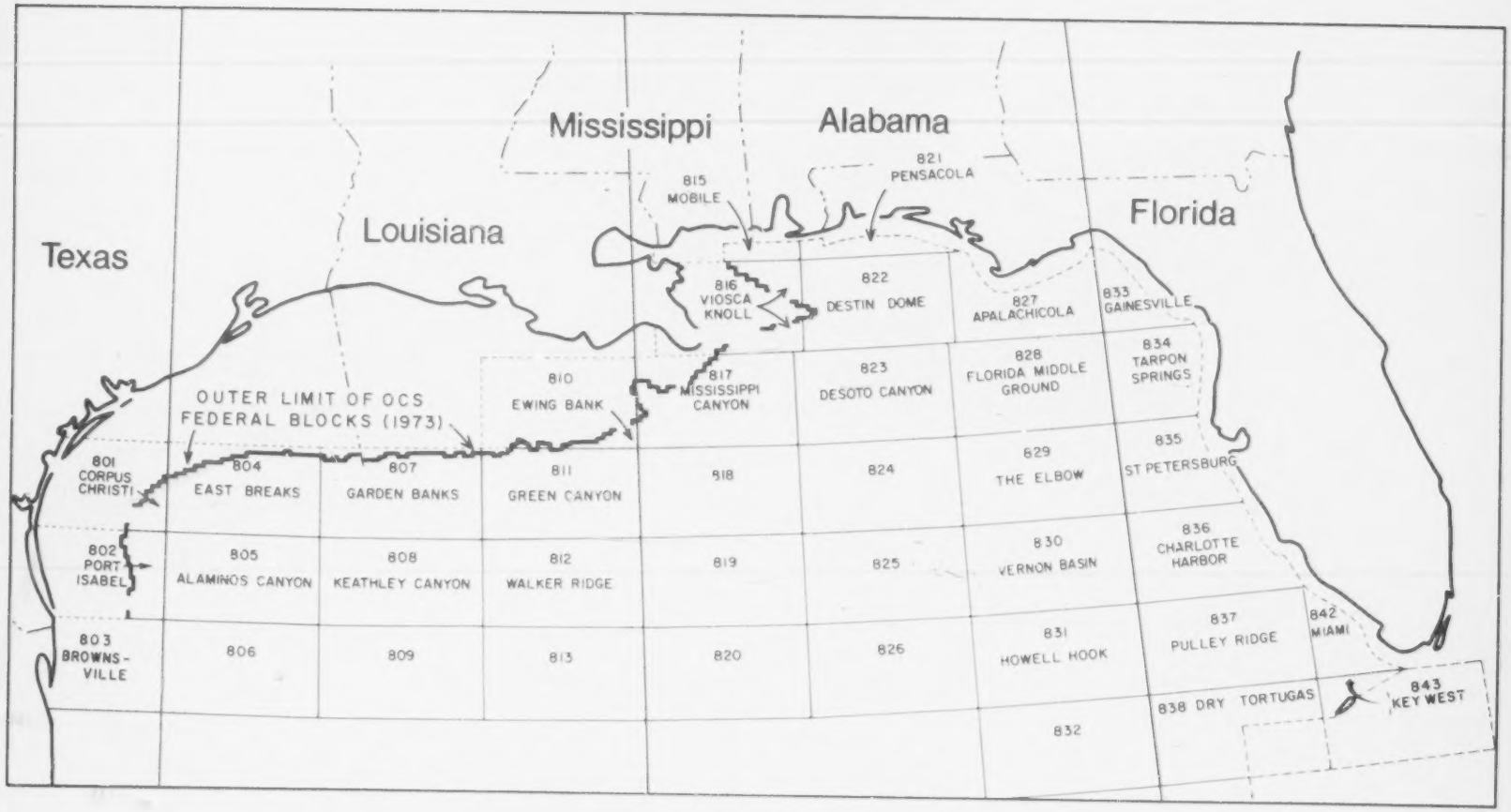
MAP IX
SUBDIVISIONS OF
OFFSHORE FEDERAL WATERS
ALASKA



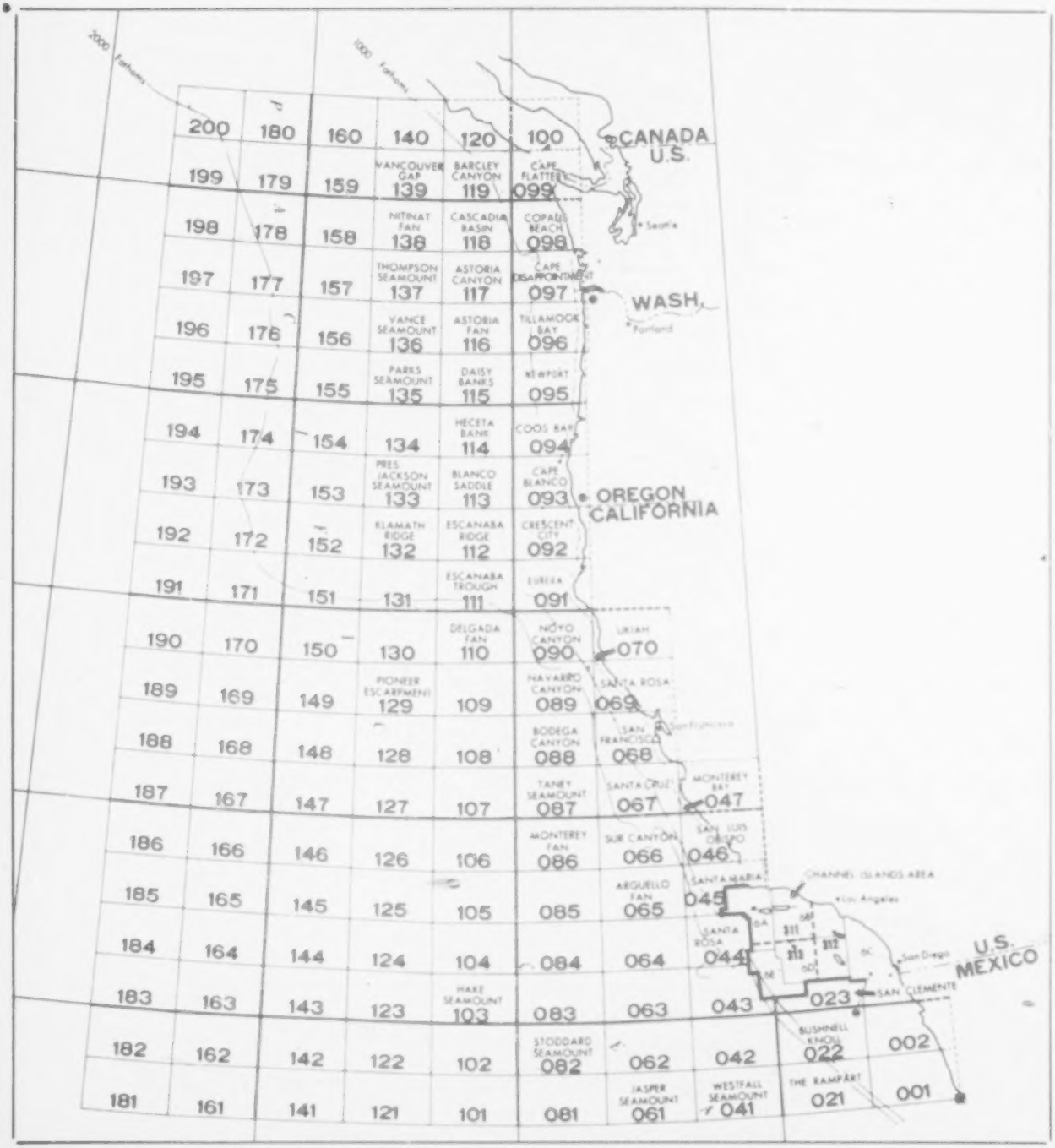
MAP X
SUBDIVISIONS OF OFFSHORE FEDERAL WATERS
ATLANTIC COAST



MAP XI
SUBDIVISIONS OF
OFFSHORE FEDERAL WATERS
GULF OF MEXICO—Northern



MAP XII
SUBDIVISIONS OF
OFFSHORE FEDERAL WATERS
PACIFIC COAST



JOINT ASSOCIATION SURVEY METHODOLOGY

API publishes annual estimates of drilling costs in the U.S. based on a sample of approximately 46 % of all wells drilled and 62 percent of total expenditures for well drilling. The results, published in the Joint Association Survey (JAS), show estimated average drilling costs and total drilling expenditures by state (or other political region), by depth, and by well type. API has cost data only for those wells within the JAS sample. Drilling costs for wells not reported in the sample must be estimated. The API receives information on depth, type, and location of non-reported wells, and uses this information along with reported costs for similar wells to estimate costs for non-sample wells.

REGRESSION ESTIMATES OF WELL COSTS.

The current JAS methodology is a modified version of the methodology used since 1978. Costs for non-reported wells are modeled as a function of the depth of the well, the type of well, and the general location of the well. A stepwise general linear regression is fit to the sample data, with the statistical routine chosing the variables that best fit the data for the particular type of well and area. The routine chooses up to three forms of the depth term: inverted depth, depth, and depth squared, and among a set of dummy classification variables for type of well, exploratory or development,single or multiple completion. The overall sample for any area is first stratified by type and separate regressions are run for each type of well. A regression is also run for the total sample for the area to insure that an alternative is available should the separate models prove inadequate.

The general functional form of the regression equation is:

(1) log (cost per foot) = a + b 1/depth
+ c depth + d depth^2
+ $p_1 I_1$ + ... + $p_9 I_9$

where depth is in thousands of feet, and the I1 through I9 are indicator variables for well type.[1]

Except for the 1/depth term, this equation is a polynomial, a functional form often used in regression analysis when an *a priori* functional form has not been specified. (Higher order polynomials were investigated, but did not noticeably improve the fit). The 1/depth term helps reflect the decreasing cost per foot observed at shallower depths in some areas. (As depth increases, 1/depth decreases in size, so the term's contribution to estimated cost per foot can be large for shallow depths, but becomes small at greater depths).

The inclusion of indicator variables allows the level of costs to vary by well type. Since the above equation is in log form, different well types are estimated to be proportional to one another, with the proportion being determined by the regression coefficients of the indicator variables. (When oil, gas, or dry wells are regressed separately, fewer indicator variables are needed since there are fewer well types involved in each regression).

Because the regression equation is in log form, estimates on it will be biased downwards. Multiplying the original estimates by the correction factor

(2) $\frac{\text{sum of actual costs for sample}}{\text{sum of estimated costs for sample}}$

yields unbiased estimates.

PROCEDURE. Once the JAS sample data have been collected and verified, the regression estimates for each geographic area are made using equations (1) and (2). In some areas, oil, gas, and dry wells are combined in one equation. When the sample is large enough, a separate equation is used for each of these three well types. Inevitably, some non-sample wells fall outside the depth range of the sample. Since, statistically speaking, there is no reason to expect the regression estimates to be "reasonable" for these depths (or area) where there is no sample, some of these costs must be estimated independently based on costs in similar areas or on previous year's data. This was necessary for approximately 5.3 percent of all unreported wells in 1987.

1 An indicator variable takes on the value 1 if the observation is a member of a certain class, and a value of 0 if it is not. In the above equation, the nine indicator variables identify whether a well is one of the ten well types (for example, exploratory oil single completion, development gas multiple completion, exploratory dry, and so on). The tenth well type is identified when all indicator variables are 0.

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